Casper Division
Production, U.S. & Canada

Marathon Oil Company

P.O. Box 2659
Casper, Wyoming 82602
Telephone 307/577-1555

August 2, 1982

MMS
Attn: Mr. Ed Guynn
2000 Administration Building
1745 West 1700 South
Salt Lake City, UT 84104

Dear Mr. Guynn:

At the request of Mr. Bob Turri, BLM, Monticello, Utah, office, the presite and staking, as well as the predrill of this proposed well, was accomplished at the same time.

BLM and MMS recommendations and stipulations are incorporated in the 13-Point Program.

The purpose was to save time and better utilize personnel in both agencies. Marathon agrees that this purpose was accomplished.

The following representatives were present:

Brian Wood, BLM, Monticello, Utah
Carl Bassett, Landman (MOC), Casper, Wyoming
Gary Alsobrook, Landman (MOC), Casper, Wyoming
Fred Thomas, Surveyor, Cortez, Colorado
Asa Nielson, Head Archeologist, BYU, Provo, Utah
Mark Nidiffer, Surveyor, Thomas Engineering, Cortez, Colorado
Art Guthrie, Asst. Drilling Superintendent (MOC), Casper, Wyoming
Walt West, Government Compliance (MOC), Casper, Wyoming
Don Englishman, MMS, Durango, Colorado
Suzy Kopriva, Geologist (MOC), Casper, Wyoming
Jesse O'Neal, District Engineer (MOC), Casper, Wyoming

Yours very truly,

MARATHON OIL COMPANY

Walt West
Government Compliance

WEW:jmb

Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL
OIL WELL [X] GAS WELL [ ] OTHER SINGLE ZONE [ ] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR
Marathon Oil Company

3. ADDRESS OF OPERATOR
P.O. Box 2659, Casper, WY 82602

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface
148.84' FSL & 1,189.33' FEL SESE
At proposed prod. zone

5. LEASE DESIGNATION AND SERIAL NO.
U 13921

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME
Tin Cup Mesa Unit

8. FARM OR LEASE NAME
Tin Cup Mesa

9. WELL NO.
1-23

10. FIELD AND POOL, OR WILDCAT
Tin Cup

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec 23, T38S, R25E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
8½ miles northwest of Hatch's Trading Post, Utah

12. COUNTY OR PARISH: San Juan
13. STATE: Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 149'

16. NO. OF ACRES IN LEASE: 80

17. NO. OF ACRES ASSIGNED TO THIS WELL: 80

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: None

19. PROPOSED DEPTH: 5,810' Abdn

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
5,107.45' Ungraded Ground, 5,121' KB (est)

22. APPROX. DATE WORK WILL START*
August 15, 1982

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
Please see Item 4 of 10-Point for complete casing and cementing program				

1. Surveyor's plat and rig laydown
2. Ten-Point Drilling Program
3. BOP Schematic
4. Thirteen-Point Surface Plan
5. Maps and Diagrams

RECEIVED
AUG 04 1982
DIVISION OF OIL, GAS & MINING

The person responsible for the NTL-6 is: Walt West
Government Compliance
Marathon Oil Company
OFFICE: (307) 577-1555
HOME: (307) 235-1420

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED Dale Caddy TITLE District Operations Manager DATE August 2, 1982

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

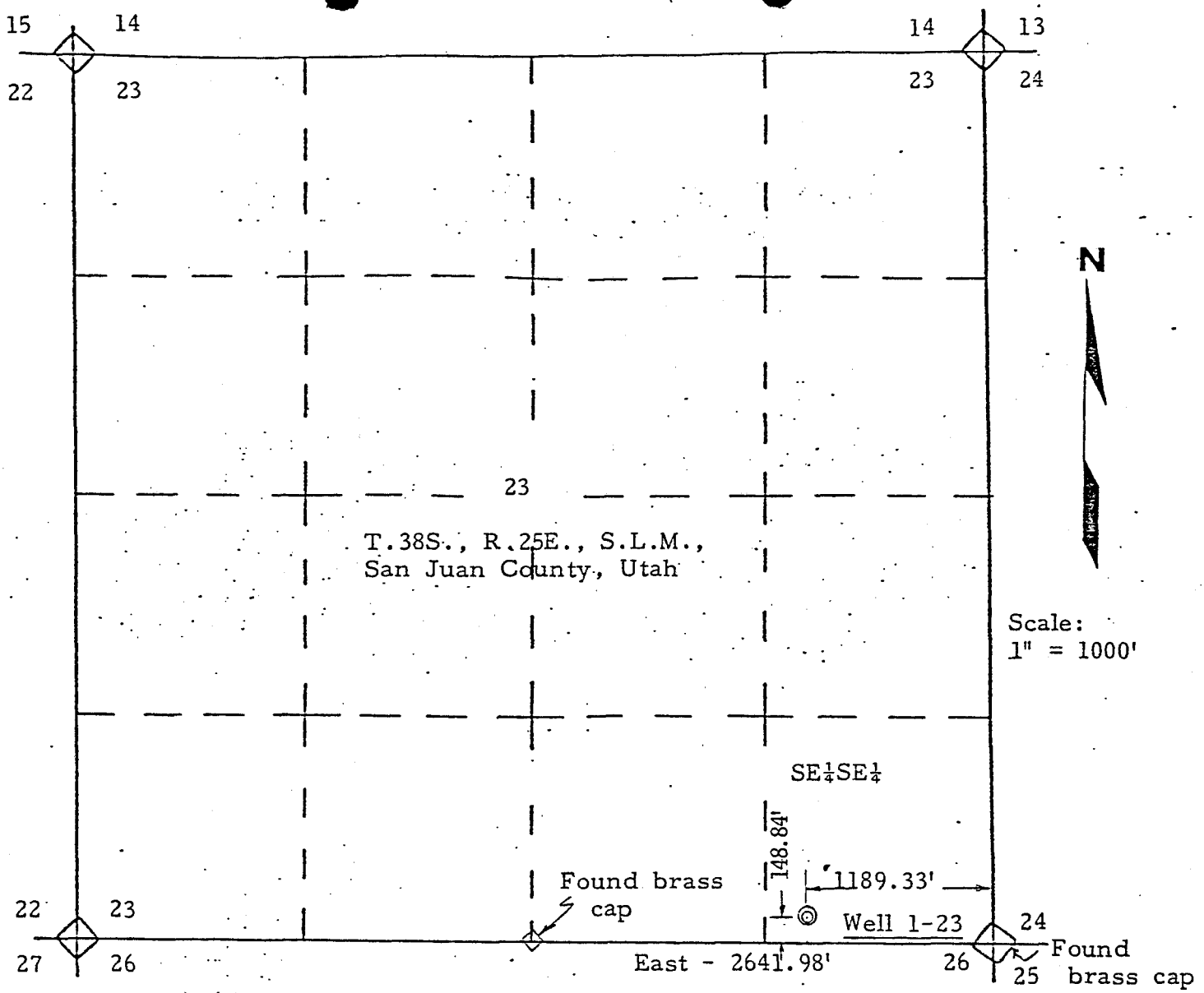
APPROVED BY _____ TITLE _____

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 8-6-82
BY: [signature]

*See Instructions On Reverse Side

Marathon Oil Company - Location of Well No. 1-23 July 9, 1982



Basis of bearing is the East-West bearing between the USGLO brass caps on the S¼ Corner and the SE Corner of Section 23.

I, Fredric P. Thomas, of Cortez, Colorado, do hereby certify that in accordance with a request from Walt West, of Casper, Wyoming, for Marathon Oil Company, I made a survey on the 29th day of June, 1982, for location and elevation of the Tincup Mesa Unit Well No. 1-23. As shown on the above map, the wellsite is in the SE¼SE¼ of Section 23, Township 38 South, Range 25 East, of the Salt Lake Meridian, San Juan County, Utah. The elevation is 5107.45 feet, ungraded ground, elevation datum is the ungraded ground level elevation on Well No. 1-26, which is elev. 5112.

REFERENCE POINT, N12°50'34"W - 300', Rebar and lath, elev. top of rebar = 5107.73 feet.
REFERENCE POINT, S12°50'34"E - 300', Rebar and lath, elev. top of rebar = 5088.62 feet.
REFERENCE POINT, N77°09'26"E - 300', Rebar and lath, elev. top of rebar = 5094.06 feet.
REFERENCE POINT, S77°09'26"W - 300', Rebar and lath, elev. top of rebar = 5094.48 feet.

Thomas Engineering, Inc.
215 No. Linden
Cortez, Colorado 81321
303-565-4496

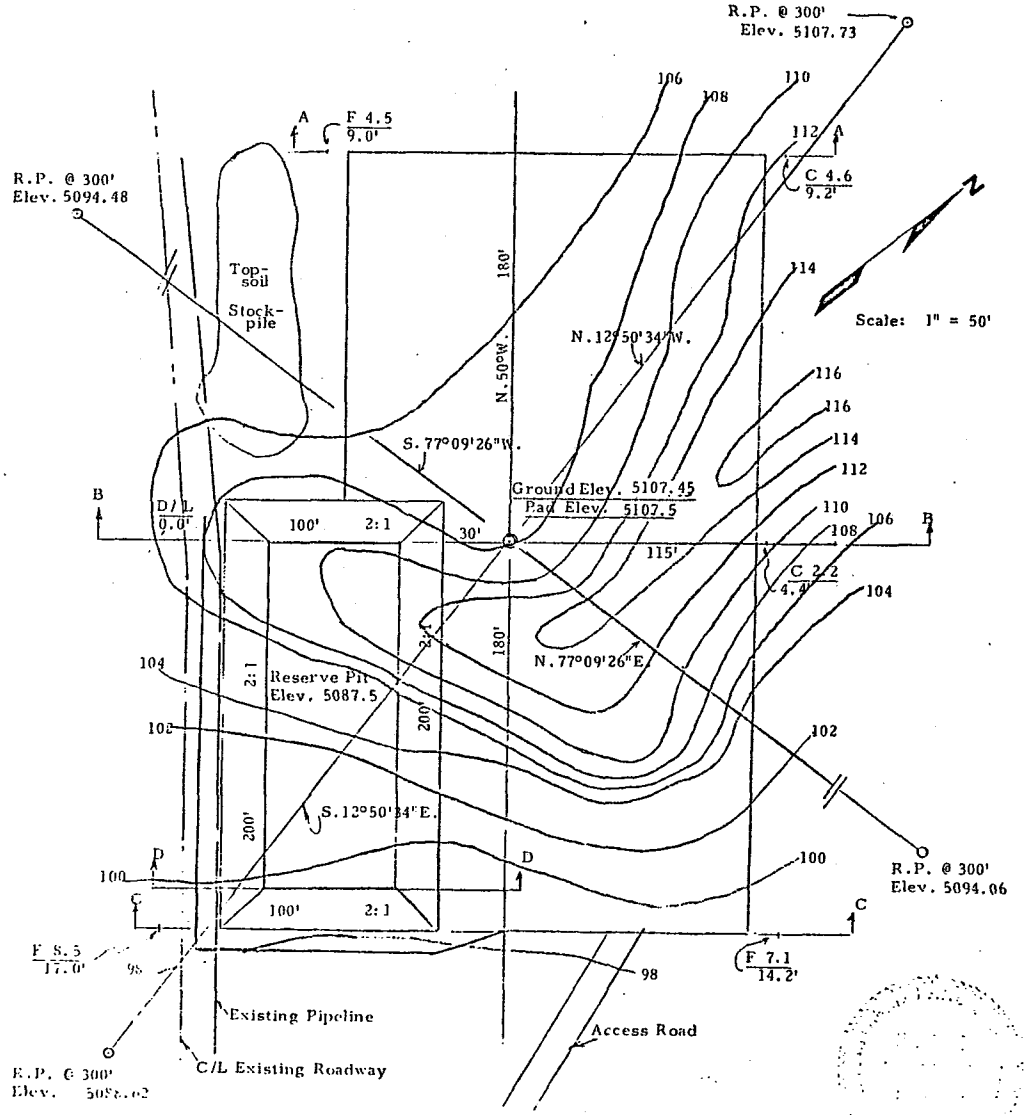
No. 4946
FREDRIC P. THOMAS

Fredric P. Thomas, PE-LS
Colo. Reg. No. 6728

Prepared by: Thomas Engineering, Inc.
215 No. Linden St.
Cortez, Colorado 81321
Phone: 303-565-4496

MARATHON OIL COMPANY, TINCUP MESA UNIT, WELL NO. 1-23
Located in the SE¼SE¼ of Section 23, T.38S., R.25E., S.L.M.,
San Juan County, Utah

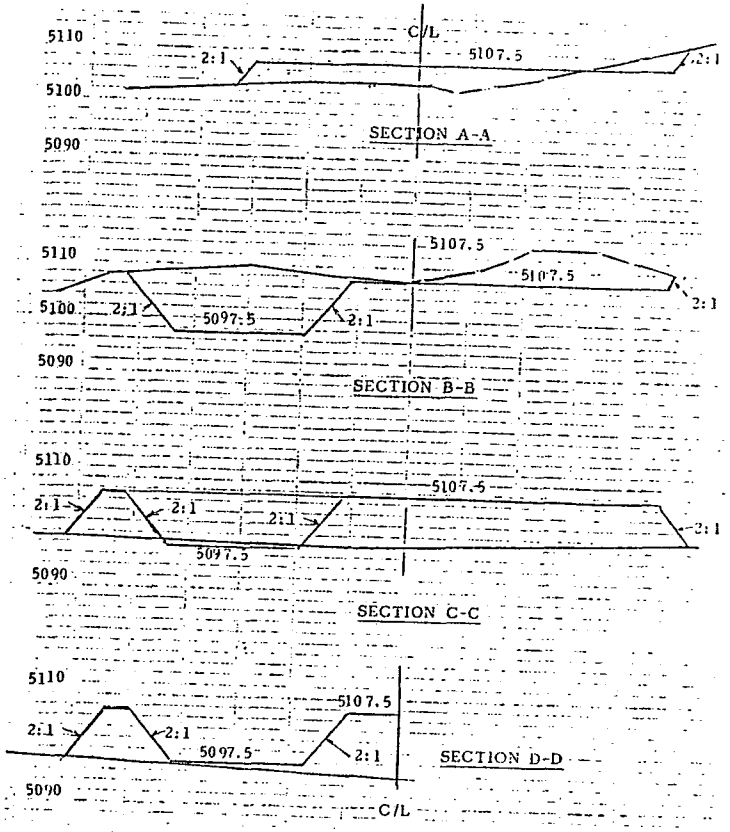
MAP TO ACCOMPANY PERMIT TO DRILL
Applicant: Marathon Oil Company
Date of preparation: July 9, 1982



DETAIL OF PROPOSED WELLSITE

CROSS-SECTION OF LAYDOWN DIRECTION AND RESERVE PIT

Horizontal scale: 1" = 50' Vertical scale: 1" = 20'



TOTAL YARDAGE

Cut = 8,049 C.Y. Fill = 4,420 C.Y. Topsoil = 1,500 C.Y.
Spoil pile = 1,024 C.Y. Reserve pit capacity = 25,650 barrels
Shrinkage factor: 1.25

Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
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149'

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80

17. NO. OF ACRES ASSIGNED TO THIS WELL
80

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.
None

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5,810'

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
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4. Thirteen-Point Surface Plan
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The person responsible for the NTL-6 is: Walt West
Government Compliance
Marathon Oil Company
OFFICE: (307) 577-1555
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24.

SIGNED Dale Caddy TITLE District Operations Manager DATE August 2, 1982

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY W. P. Martin FOR E. W. GUYNN TITLE DISTRICT OIL & GAS SUPERVISOR DATE AUG 13 1982

CONDITIONS OF APPROVAL, IF ANY:

NOTICE OF APPROVAL
State O & G

*See Instructions On Reverse Side

CONDITIONS OF APPROVAL ATTACHED TO OPERATOR'S COPY

FLARING OR VENTING OF GAS IS SUBJECT TO NTL 4-A DATED 1/1/80

MARATHON OIL COMPANY

DRILLING OPERATIONS PLAN

DATE: August 2, 1982

WELL NAME: Tin Cup Mesa #1-23

LOCATION: 148.84' FSL & 1189.33' FEL, Sec. 23 T38S R25E, San Juan County, Utah

1. Geologic name of the surface formation:

   Jurassic Morrison Formation

2. Estimated tops of important geological markers:

   All depths referred to in this 10-point program will be K.B. measurements.

Formation	Depth	Datum	Formation	Depth	Datum
Carmel	821'	+4,293'	Paradox	5,284'	- 170'
Navajo	847'	+4,267'	U. Ismay	5,439'	- 325'
Kayenta	1,066'	+4,048'	Hovenweep	5,588'	- 474'
Wingate	1,230'	+3,884'	L. Ismay	5,626'	- 512'
Chinle	1,585'	+3,529'	Gothic Shale	5,673'	- 559'
Shinarump	2,384'	+2,730'	Desert Creek	5,692'	- 578'
Moenkopi	2,438'	+2,676'	Chimney Rock	5,777'	- 663'
Cutler	2,504'	+2,610'	Akah	5,798'	- 684'
Honaker Trail	4,344'	+ 770'	P.T.D. *	5,810'	- 696'

   * If significant hydrocarbon shows are encountered, the well will be T.D.'d at about 5,798' to avoid entering the Akah Salt.

3. Estimated depths at which oil, water, gas, or other mineral bearing formations are expected to be encountered:

Formation	Depth (K.B.)	Content
Carmel	821'	Water
Navajo	847'	Water
Wingate	1,230'	Water
DeChelly**	2,504'	Brine
Honaker Trail	4,344'	Oil***
Paradox	5,284'	Brine
Upper Ismay	5,439'	Oil***
Lower Ismay	5,626'	Oil***
Desert Creek	5,692'	Oil***

   ** The Cutler formation may contain the DeChelly member.
   *** Primary Objectives.

4. The Proposed Casing Program:

Casing Design

Casing String	Hole Size	Interval	Section Length	Size (OD)	Weight, Grade and Joint	New Or Used	Mud Weight	1000# Tension Load	SF_t	SF_c	SF_b
Conductor	20"	0 - 80'	80'	16"	Thinwall	New					
Surface	12-1/4"	0 - 1,350'	1,350'	9-5/8"	36# K-55	New	8.5-9.0	423	10.0	3.03	1.28
Production	8-3/4"	1,350'	5,810'	5-1/2"*	15.5# K-55	New	9.4-11.2	248	3.30	1.14	1.70

* If more than one productive zone is found, 7" production casing will be set.

If only the Desert Creek is productive, 5-1/2", N-80, 20#/ft, STC will be set so as to accommodate fracture stimulation of the formation.

Cement Program:

9-5/8" Casing

Cement Volume: 1,350' x .3132 cu.ft/ft x 2.0 excess = 846 cu.ft.
Lead Slurry: 900' calculated plus 100% excess - 307 sacks of high yield cement (BJ Lite, Halliburton Lite, etc.) containing 1/4# sack cellophane flakes and 2% $CaCl_2$.
Slurry Yield: 1.84 cu.ft/sack
Slurry Density: 12.7#/gal
Water Requirement: 9.9 gal/sack
Tail Slurry: 450' calculated plus 100% excess - 239 sacks of Class "B" cement containing 1/4# sack cellophane flakes and 2% $CaCl_2$.
Slurry Yield: 1.18 cu.ft/sack
Slurry Density: 15.6#/gal
Water Requirement: 5.2 gal/sack
Casing Equipment: Float shoe, float collar, 3 centralizers.
WOC time will be a minimum of 6 hours. If float equipment holds, closed-in pressure after cementing is not recommended.

Cement Program (continued):

5-1/2" Casing

1st Stage:
Cement Volume: 2,300' x .2526 cu.ft/ft x 1.35 excess = 785 cu.ft.
Slurry: 2,300' calculated plus 35% excess from logs - 639 sacks of Class "B" cement containing 1.0% fluid loss additive (D-19, Halad-9, etc.).

2nd Stage:
Cement Volume: 2,810' x .2812 cu.ft/ft x 1.35 excess = 1,012 cu.ft.
Slurry: 2,810' calculated (500' into 9-5/8" casing) plus 35% excess from logs - 550 sacks of high yield cement (BJ Lite, Halliburton Lite, etc.).
Casing Equipment: Locate stage collar at 3,510'. A float shoe, flapper type float collar, 1 cement basket, and 10 centralizers spaced over the bottom 800' of hole will be used. If float holds, closed-in pressure after completion of cement job is not recommended. Set casing on slips as soon as possible following cement job.
Slurry Preflush: 1st and 2nd stage 20 bbls.

5. Pressure Control Equipment:

BOP equipment will include a double-ram type preventer with pipe and blind rams and a rotating head (API arrangement SRdG). All equipment will have a 3,000 psi or greater working pressure. Rams, valves, lines, choke manifold, and casing will be tested to 200 psi for 5 minutes and 1,500 psi for 15 minutes prior to drilling out from under 9-5/8" surface casing. After drilling casing shoe and 5' of additional hole, a shoe test will be performed to 13.5 ppg equivalent mud weight or leakoff, whichever occurs first. The accumulator should be of sufficient capacity to meet the following requirements:

1. Ability of immediate closure to all members of the stack without recharging.
2. A total of 50% of the original fluid should remain as a reserve after accumulator activation.
3. A minimum pressure of 1,200 psi is required to insure that the preventers remain closed.

Visual checks of the equipment will be made tourly. Function pipe rams daily and blind rams on trips.

6. Drilling Mud Program:

From	To	Type Mud	Weight	% Oil	Water Loss
0'	1,350'	Spud	8.5-9.0	0	No Control
1,350'	Cutler 2,504'	Gel/Water	8.5-9.0	0	No Control
Cutler 2,504'	U. Ismay 5,439'	Gel/Chemical	9.4-10.8	0	10.0-12.0 cc's
U. Ismay 5,439'	T.D.	Gel/Chemical	10.8-11.2	0	8.0-9.0 cc's

Mud weights should be kept to a minimum to maximize ROP and minimize lost circulation. However, the existence of water flows may necessitate an increase in mud weight while drilling. Sufficient barite should be on location prior to spud in order to increase mud weight to 11.7 ppg if required. Lost circulation is expected in the upper hole before setting surface casing.

7. Auxilliary Equipment Required:

A drilling rate recorder, calibrated to record drilling time for each one foot drilled, will be used.

A Kelly cock will be used and a full opening safety valve will be available on the rig floor.

7. Auxilliary Equipment Required (continued):

The mud system will include a desander/desilter, gas buster, or degasser.

A manual adjustable choke will be used.

Deviation Control:

From	To	Maximum Distance Between Surveys	Maximum Deviation From Vertical	Maximum Change Per 100' of Depth
0'	1,350'	250'	1^{o}	1^{o}
1,350'	T.D.	500'	5^{o}	1^{o}

8. Testing, Logging, Coring, and Fracing Program:

Samples: 10' intervals from 1,350' to T.D. with a two-man mud logging unit.

Logging:
1. DI-SFL/GR from surface casing to T.D.
2. BHC Sonic/GR from surface casing to T.D.
3. FDC/CNL-GR from surface casing to T.D.
4. Dipmeter from surface casing to T.D.
5. Coriband (Cyber look) from top of Honaker Trail Formation to T.D.

Testing:
1. Honaker Trail
2. Upper Ismay
3. Desert Creek

Coring: Approximately 300' of core in intervals to be determined from formation tops while drilling.

Fracing Program: If necessary, acid stimulation.

9. Abnormal Conditions:

The DeChelly Member of the Cutler formation, if penetrated, may contain over-pressured salt water requiring 10.5 to 11.5 ppg mud weight to control.

Maximum anticipated bottom hole pressure is approximately 3,450 psi.

Maximum anticipated bottom hole temperature is approximately 175^{o}F.

10. Anticipated Starting Date and Duration:

Starting Date: August 15, 1982

Duration: 34 Days

Name Michael E. Krugh

Title Drilling Superintendent

Date August 2, 1982

Identification No. 459-82

United States Department of the Interior
~~Geological Survey~~ MMS
2000 Administration Building
1745 West 1700 South
Salt Lake City, Utah 84104

NEPA CATEGORICAL EXCLUSION REVIEW

PROJECT IDENTIFICATION

Operator Marathon Oil Company

Project Type single zone oil explorational well

Project Location 149' FSL/1189' FEL, sec. 23, T. 38S, R. 25E, San Juan County, Ut.

Well No. 1-23 Tin Cup Mesa Lease No. U-13921

Date Project Submitted _____

FIELD INSPECTION Date June 29, 1982

Field Inspection Participants

Walt West/Jess Oneal/Art Guthrie - Marathon Oil Co.
Suzy Kopriva - geophysist, Marathon
Asa Nielson/Ken Wintch - B.L.M. archy.
Brian Wood - Bureau of Land Management
Carl Bassett/Gary Alsobrook - Marathon Oil
Fred Thomas/Mark Widdifer - Thomas Engineering
Don Englishman - MMS

I have reviewed the proposal in accordance with the categorical exclusion review guidelines. This proposal would not involve any significant effects and, therefore, does not represent an exception to the categorical exclusions.

June 29, 1982
Date Prepared

Donald Englishman
Environmental Scientist

I concur

AUG 12 1982
Date

FOR E. W. GUYNN
DISTRICT OIL & GAS SUPERVISOR
District Supervisor

CATEGORICAL EXCLUSION REVIEW INFORMATION SOURCE

Criteria 516 DM 2.3.A	Federal/State Agency: Correspondence (date)	Federal/State Agency: Phone check (date)	Federal/State Agency: Meeting (date)	Local and private correspondence (date)	Previous NEPA	Other studies and reports	Staff expertise	Onsite inspection (date)	Other
1. Public health and safety						✓ 9	✓		●
2. Unique characteristics							✓		
3. Environmentally controversial							✓		
4. Uncertain and unknown risks							✓		
5. Establishes precedents							✓		
6. Cumulatively significant							✓		●
7. National Register historic places	✓1								
8. Endangered/ threatened species	✓1								
9. Violate Federal, State, local, tribal law						✓4	✓		

CATEGORICAL EXCLUSION REVIEW COMMON REFERENCE LEGEND

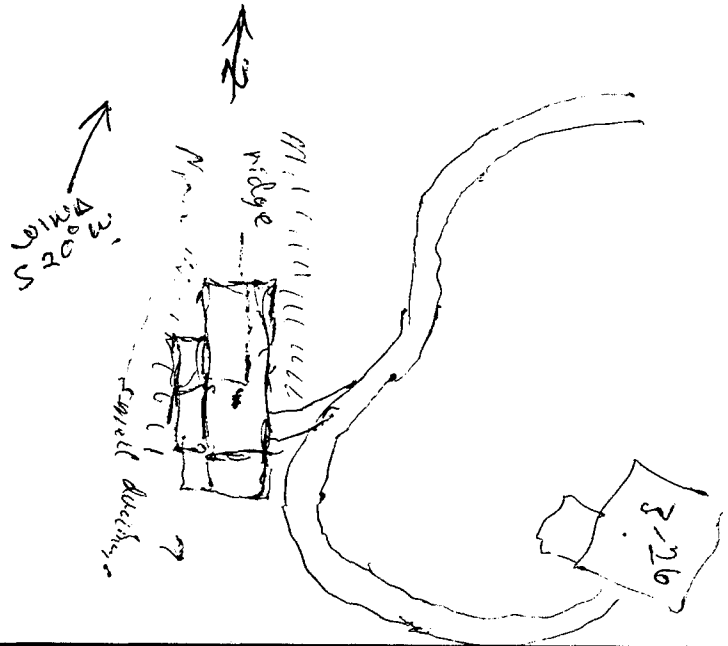
1. Surface Management Agency Input
2. Reviews Reports, or information received from Geological Survey (Conservation Division, Geological Division, Water Resource Division, Topographic Division)
3. Lease Stipulations/Terms
4. Application for Permit to Drill
5. Operator Correspondence
6. Field Observation
7. Private Rehabilitation Agreement

Remarks:

1. Water from BLM wells

2. location moved about 50' north from original location to set it away from existing road and pipeline.

3. layout:



Date _____ EA No. 459-82

CER/EA Pre-Drill Environmental Evaluation

Inspection date(s): June 29, 1982

Project Location: Marathon Oil Co. (operator) 1-23 Tin Cup Mesa (well no.)

149 'FSL, 1189 'FEL, SESE (1/4 1/4)

Sec. 23, T. 38S, R. 18E, San Juan County, Utah

U-13921

Environmental Criteria

1. Public health and safety:

Impacts to local environment by rig/equipment - No

Impacts by environment to rig/equipment - No

Safety hazards - No

Misc. impacts - No

Determination - (negligible/adverse effect)

Effect: (Significance)

Alternatives -

2. Unique characteristics:

Wilderness Study Area? No X Yes ___ (Number) ___

Historic or Cultural Resources? No X Yes ___ (arch. report) ___

Park, Recreation, and/or Refuge? No X Yes ___ (describe) ___

Wild and Scenic Rivers? No X Yes ___ (Identify) ___

Sole or Principal Drinking Water Aquifers? No X Yes ___ (ME report)

Prime Farmlands? No X Yes ___ (Describe, D of A report) ___

Wetlands, Floodplains? No X Yes ___ (10, 50, 100/yr? ___, Corp of Engineers 404 permit? ___ WRC quidelines)

Ecologically Significant/Critical Areas? No X Yes ___ (i.e. winter range, strutting, spawning, breeding, fawning grounds?; range study area?; Nat'l Register of Historic Landmarks?; visual resource area?)

Other - No

Determination - (negligible/adverse effect)

Alternatives -

3. Environmentally Controversial:
Source of controversy - None

Issues -

Facts -

Alternatives -

Decisions (if any) -

4. Uncertain and Unknown Risks: (Refer to APD, ME)
H2S potential - (ME report, well histories) No
High pressures - No
Landslides/slumps - No

Unstable soils - (soil surveys) No

Severe topography - (slope %, % side slopes, rim rock, etc)
No
Flash flood hazard - No

Lost circulation potential - (history of wells in area, peculiar geologic features, ie, shear zones) No
Potential fresh water aquifers - (ME report, extension of surface casing, use of intermediate casing, protection requirements)
No
Zones of other mineral deposits - (ME report, protection requirements - No
Buried pipelines, water lines, cable - No

Overhead power/telephone lines - No

Irrigation channel(s) - No

Determination - (negligible/adverse effect)
Alternatives -

5. Establishes precedent:
Nature of precendent - (ie, first well drilled in Nat'l Recreation Area, significance, effects) No

Determination - (negligible/adverse effect)
Alternatives -

6. Cumulatively significant:
Will the addition of this one well and access route when weighed against all currently existing environmental conditions, be cumulatively significant enough to be considered as constituting a major federal action? No X Yes
Determination - negligible
Significance -
Alternatives -

7. Adversely affects properties listed or eligible for listing in the national register of historic places: No X Yes ___ arch report ___
Determination: negligible

Significance: ___

Alternatives: ___

8. Affect a species listed or proposed to be listed on the List of Endangered or Threatened Species: NA
Effect: ___
Determination: (negligible/adverse effect) ___

Signficance: ___

Alternatives: ___

9. Threaten to violate a Federal, State, local or tribal law or requirements imposed for the pretection of the environment or which require compliance with Executive Order 11988 (Floodplains Management), Executive Order 11990 (Protection of Wetlands), or the Fish and Wildlife Coordination Act: NO
Effect: ___
Determination: (negligible/adverse effect) ___

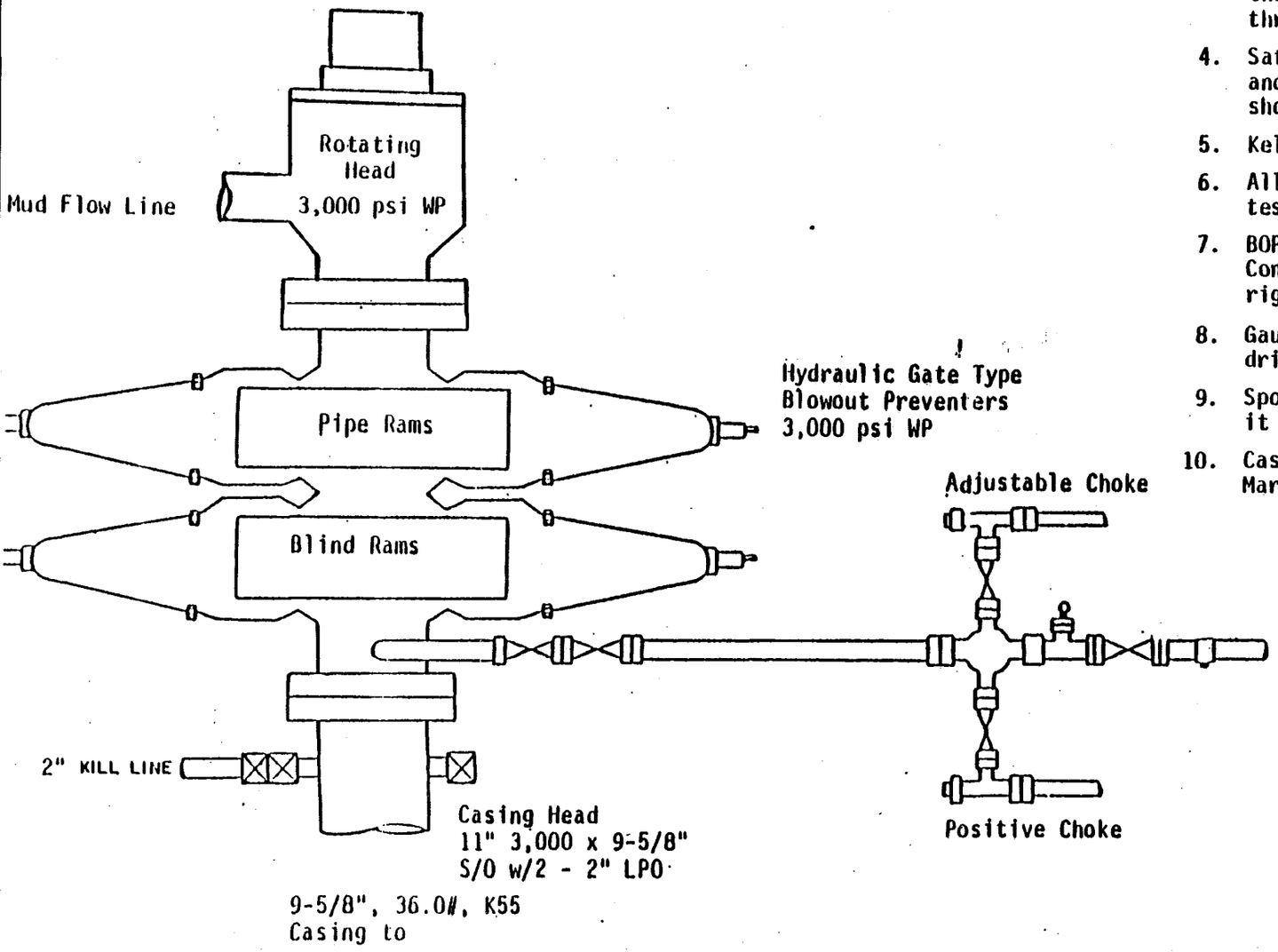
Significance: ___

Site - specific stipulations (Mitigating measures designed to reduce/eliminate adverse environmental effects) ___

See APD Stips.

EA Determination: No ___ Yes X

Tin Cup Mesa #1-23
SE, SE, Sec. 23, T38S, R25E
San Juan Co., Utah



1. Blowout preventers, master valve, plug valve and all fittings must be in good condition. Use new API Seal Rings.
2. All fittings (gates, valves, etc.) to be of equivalent pressure rating as preventers. Valves to be flanged and at least 2" unless otherwise specified. Valves next to BOP to be plug type and nominal 3".
3. Equipment through which bit must pass shall be as large as the inside diameter of the casing that is being drilled through.
4. Safety valve must be available on rig floor at all times and with proper connections. The I.D. of safety valves should be as great as I.D. of tool joints on drill pipe.
5. Kelly safety valve installed, same working pressure as BOP's.
6. All lines and controls to preventers must be connected and tested before drilling out of surface pipe.
7. BOP's must be fluid operated, complete with accumulator. Controls may be either on floor or ground near steps from rig floor.
8. Gauge will be installed for testing but removed while drilling.
9. Spool not required, but when side outlet on BOP's is used, it must be below bottom ram.
10. Casinghead and casinghead fittings to be furnished by Marathon Oil Company.

MARATHON OIL COMPANY
SURFACE USE & OPERATIONS PLAN

DATE: August 2, 1982

WELL NAME: Tin Cup Mesa #1-23

LOCATION: 148.84' FSL & 1189.33' FEL, Sec. 23 T38S R25E, San Juan County, Utah

#1 Existing Roads:

A. Proposed well site as staked. (Actual staking should include two each 200-foot directional reference stakes).

See survey plat

B. Route and distance from nearest town and locatable reference point to where well access route leaves main road.

8-1/2 miles northwest of Hatch's Trading Post, Utah.
See Diagram "A"

C. Access road(s) to location color-coded or labeled.

See map Diagram "A", color-coded green

D. If exploratory well, all existing roads within a 3-mile radius (including type of surface, conditions, etc.).

See map Diagram "A"

E. If development well, all existing roads within a 1-mile radius of well site.

See map Diagram "A"

F. Plans for improvement and/or maintenance of existing roads.

Blade work on county roads will be in conjunction with San Juan County Road Department, Monticello, Utah; also, any roads tying into county roads will be to BLM stipulations.

#2 Planned Access Roads:

Map showing all necessary access roads to be constructed or reconstructed, showing:

(1)	Width	18'
(2)	Maximum grades	0-5°
(3)	Turnouts	None
(4)	Drainage design	Ditched and crowned, trailer ditches where needed.

(5) Location and size of culverts and brief description of any major cuts and fills.

None

(6) Surfacing material

Gravel

(7) Necessary gates, cattleguards, or fence cuts.

No cattleguards or fence cuts

(8) (New or reconstructed roads are to be center-line flagged at time of location staking).

Flagged with hot orange and blue flagging material. Entire area was walked by archeologist from BYU.

#3 Location of Existing Wells:

Two-mile radius map if exploratory, or 1-mile radius map if development well, showing and identifying existing:

(1) Water wells None

(2) Abandoned wells None

(3) Temporary abandoned wells Tin Cup Mesa #1-25

(4) Disposal wells None

(5) Drilling wells None

(6) Producing wells Tin Cup Mesa #3-26 (Testing)

(7) Shut-in wells None

(8) Injection wells None

(9) Monitoring or observation wells for other resources.

None

#4 Location of Existing and/or Proposed Facilities:

A. Within 1-mile radius of location show the following existing facilities owned or controlled by lessee/operator:

(1) Tank Batteries Tin Cup Mesa #1-25

(2) Production Facilities (MOC) #1-25

(3) Gathering Lines None

(4) Gas Gathering Lines None

(5) Injection Lines (Indicate if any of the above lines are buried).

None

(6) Disposal Lines None

B. If new facilities are contemplated, in the event of production, show:

(1) Proposed location and attendant lines by flagging if off of well pad.
Adjacent to the access road and as close to the proposed drill site as possible, without setting on any fill.

(2) Dimensions of Facilities

See proposed Diagram "B"

(3) Construction methods and materials:

Good engineering practices will be used in construction. Materials will be obtained through local vendors and contractors.

B. If new facilities are contemplated, in the event of production, show: (cont'd)

(4) Protective measures and devices to protect livestock and wildlife.

Woven wire fences of the pit area.

C. Plans for rehabilitation of disturbed areas no longer needed for operations after construction completed.

Drill site and tank battery area will be reshaped to conform with the topography. Top soil will be distributed at the proper time. Disturbed areas scarified with contours to a depth of 12". Seeds will be broadcast, as per BLM recommendations.

#5 Location and Type of Water Supply:

A. Show location and type of water supply either on map or by written description.

See map Diagram "A"
Section 28, T38S, R26E
Section 35, T38S, R25E (Artesian water wells)

B. State method of transporting water, and show any roads or pipelines needed.

Existing roads and access road will be used to haul water to the location.

C. If water well is to be drilled on lease, so state. (No APD for water well necessary, however, unless it will penetrate potential hydrocarbon horizons).

No water well will be drilled.

#6 Source of Construction Materials:

A. Show information either on map or by written description.

Construction materials will be native soils.

B. Identify if from Federal or Indian Land.

None

C. Describe where materials, such as sand, gravel, stone and soil material, are to be obtained and used.

Any needed materials will be discussed with Mr. Bob Turri or Mr. Brian Wood of BLM, Monticello, Utah.

D. Show any needed access roads crossing Federal or Indian Lands under Item 2.

None

#7 Methods of handling Waste Disposal:

Describe methods and location of proposed containment and disposal of waste material, including:

(1)	Cuttings	Reserve Pit
(2)	Drilling fluids	Reserve Pit
(3)	Produced fluids (oil, water)	Swab Tanks

#7 Methods of Handling Waste Disposal: (cont'd)

(4) Sewage Porta Pot

(5) Garbage and other waste material (Trash pits will be completely contained with small mesh wire to prevent wind scattering trash before being burned or buried).

There will be a 10' x 10' burn pit and it will be woven wire fenced.

(6) Statement regarding proper cleanup of well site area when rig moves out.
Area will be cleaned up and all burnable material will be put in the burn pit and burned. Non-burnable debris will be buried under 2' of compacted earth. Burn permit will be obtained from State Fire Warden, John Baker. (May 1 - October 31)

#8 Ancillary Facilities:

Identify all proposed camps and airstrips on a map as to their location, area required and construction methods. (Camp center and airstrip center lines to be staked on the ground).

None

#9 Wellsite Layout:

A plat (not less than 1" = 50') showing:

(1) Cross sections of drill pad with cuts and fills.

See Diagram "C"

(2) Location of mud tanks, reserve, burn and trash pits, pipe racks, living facilities and soil material stockpiles.

See Diagram "D"

(3) Rig orientation, parking areas and access roads.

See Diagram "D"

(4) Statement as to whether pits are to be lined or unlined. (Approval as used in this section means field approval of location. All necessary staking of facilities may be done at time of field inspection). A registered surveyor is not mandatory for such operations.

Pit will not be lined. Dirt contractor will notify Mr. Bob Turri of BLM when the pit is made.

#10 Plans for Restoration of Surface:

State restoration program upon completion of operations, including:

(1) Backfilling, leveling, contouring and waste disposal; segregation of spoils materials as needed.
Site will be cleaned and waste materials put in trash burn pit, which will be covered w/2' of compacted earth at the finish of drilling operation. Reserve pit will be backfilled as soon as it's dry.

(2) Revegetation and rehabilitation - including access roads (normally per BLM recommendations).

Top soil will be redistributed and at the proper season, the following BLM seed requirements will be broadcast planted.

2#/acre Indian Rice grass; 1#/acre Alkali Sacaton; 1#/acre Fourwing Saltbrush; 2#/acre shade scale. Trees will be scattered evenly over the disturbed areas and walked down with a dozer.

#10 Plans for Restoration of Surface: (cont'd)

(3) Prior to rig release, pits will be fenced and so maintained until cleanup.

Reserve pit will be fenced on 3 sides during drilling. At completion of drilling, all pits will be fenced on the remaining side.

(4) If oil on pit, remove oil or install overhead flagging.

If there is any oil on the reserve pit, it will be removed or flagged with overhead flagging.

(5) Timetable for commencement and completion of rehabilitation operations.
Depending upon climatic conditions, restoration should be completed from six months to one year after abandoning well.

#11 Other Information:

General Description of:

(1) Topography, soil characteristics, geologic features, flora and fauna.

Sagebrush, scrub cedars, rock formations, occasionally dissected by light to heavy drainage features. Deer, rabbits, fox, small rodents, cattle, and sheep.

(2) Other surface use activities and surface ownership of all involved lands.

Access road and drill site are owned by U.S. Government. Surface facilities will be painted Federal Std. #30318, Badlands Brown.

(3) Proximity of water, occupied dwellings, archeological, historical or cultural sites.

There is no water or occupied dwelling in the area. Archeological work was performed by BYU, Provo, Utah.

#12 Lessee's or Operator's Representative:

Mike E. Krugh - Marathon Oil Company
P.O. Box 2659
Casper, WY 82602

Office: (307) 577-1555, ext. 408
Home: (307) 577-1664

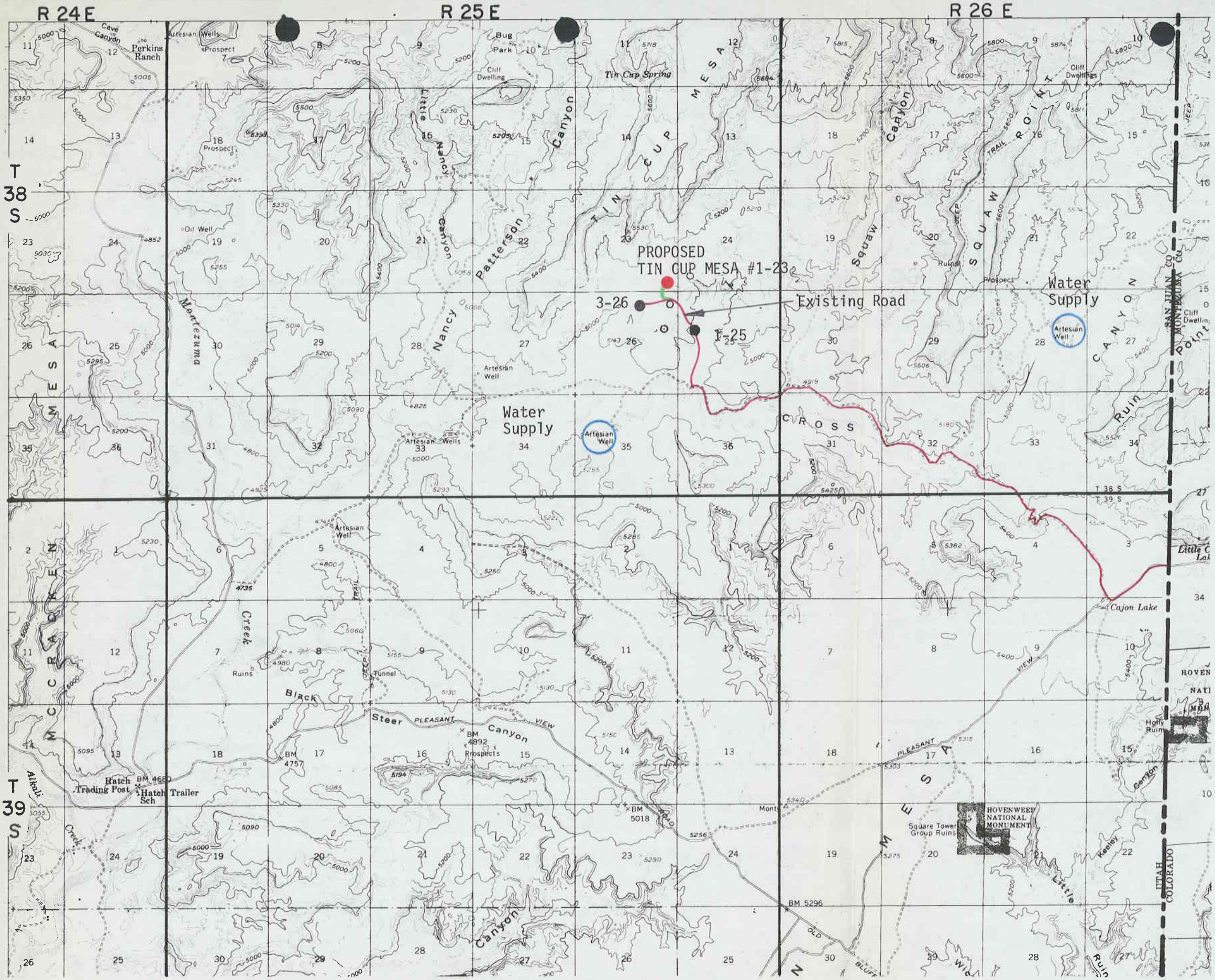
#13 Certification: The following statement is to be incorporated in the plan and must be signed by the lessee's or operator's field representative who is identified in item No. 12 of the plan:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Marathon Oil Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

7/30/82
Date

M E Krugh
Name

District Drilling Superintendent
Title



VICINITY MAP FOR

MARATHON OIL COMPANY TIN CUP MESA

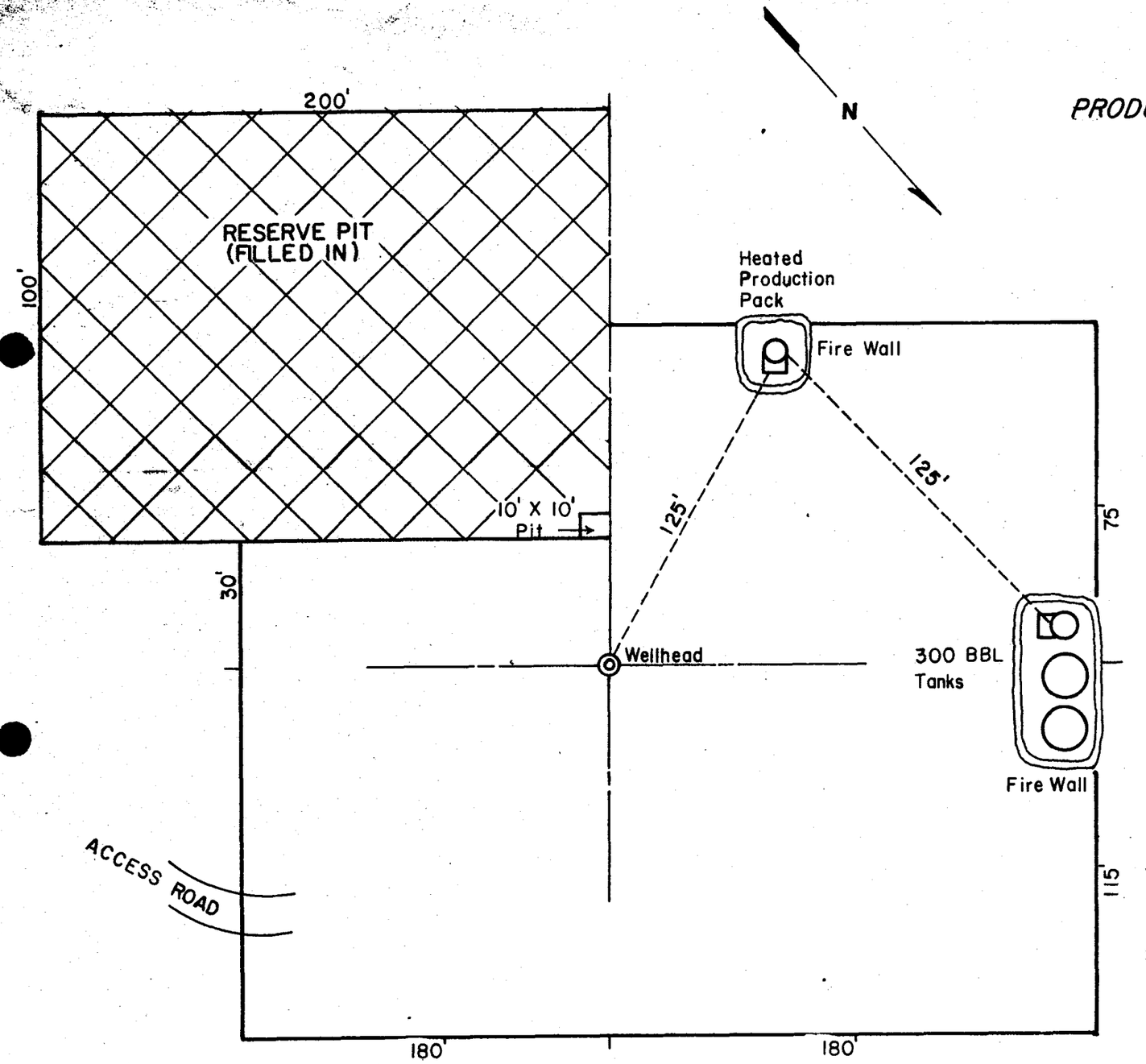
O— Staked Wells

SAN JUAN COUNTY, UTAH

SCHEMATIC of PRODUCTION FACILITIES

Scale 1"=50'
PROPOSED

DIAGRAM B



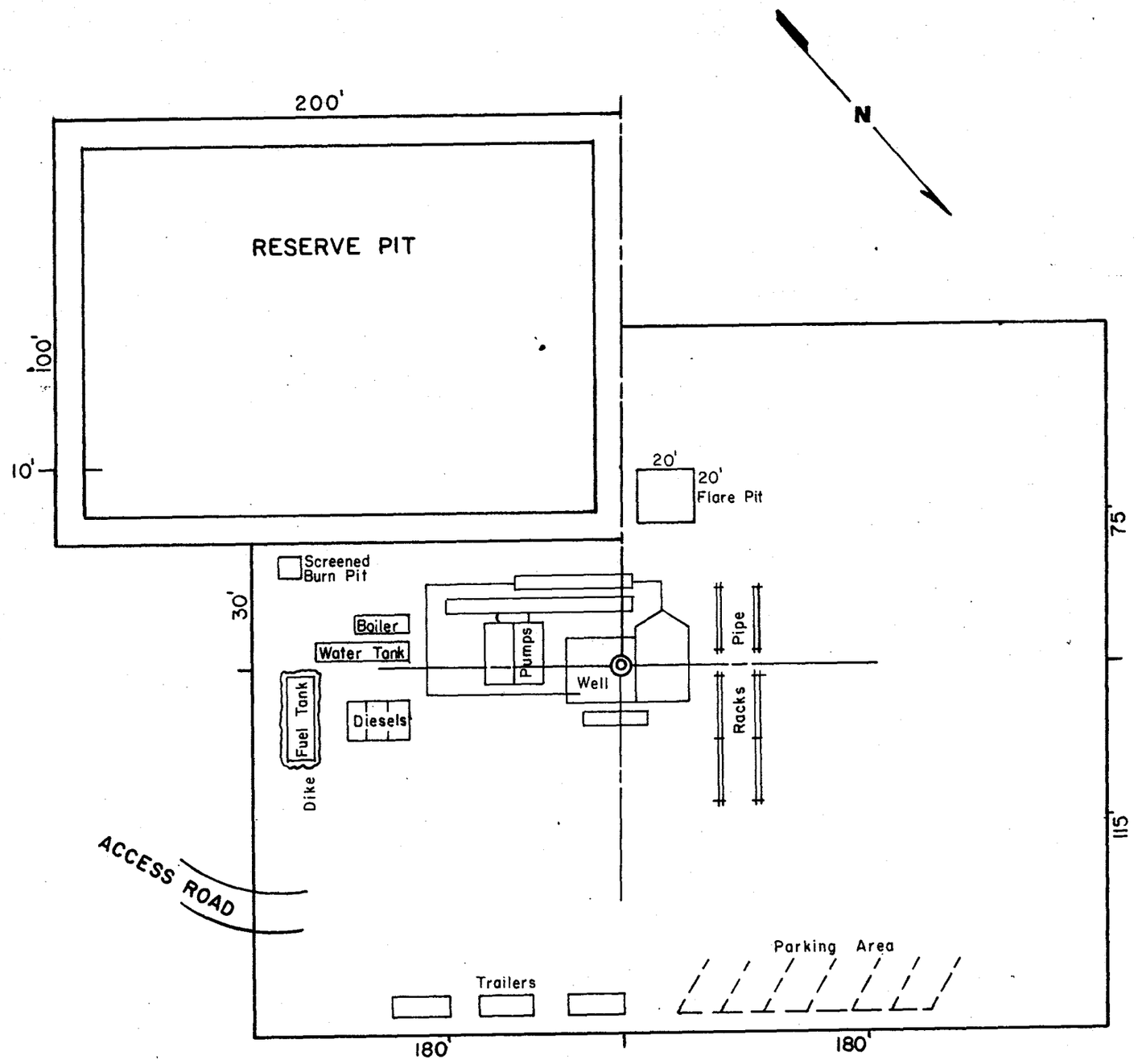
Tin Cup Mesa #1-23
SWSESE Sec. 23, T 38 S R25E
148.84' FSL & 1189.33' FEL
San Juan Co., Utah

SCHEMATIC of RIG LAYOUT

Scale 1"=50'

PROPOSED

DIAGRAM D



Tin Cup Mesa #1-23
SWSESE Sec. 23, T 38S R 25E
148.84' FSL & 1189.33' FEL
San Juan Co., Utah

** FILE NOTATIONS **

DATE: 8-6-82

OPERATOR: Marathon Oil

WELL NO: Ten Cup Mesa 1-23

Location: Sec. 23 T. 38S R. 25E County: San Juan

File Prepared: ☑ Entered on N.I.D: ☐

Card Indexed: ☐ Completion Sheet: ☐

API Number 43-037-30800

CHECKED BY:

Petroleum Engineer: OK

Director:

Administrative Aide: Unit well (Ten Cup Mesa) T38S is not the southern-most point of unit and footage distance is OK

APPROVAL LETTER:

Bond Required: ☐ Survey Plat Required: ☐

Order No. ____ O.K. Rule C-3 ☐

Rule C-3(c), Topographic Exception - company owns or controls acreage within a 660' radius of proposed site ☐

Lease Designation Fed. Plotted on Map ☐

Approval Letter Written ☐

Hot Line ☑ P.I. ☑

August 9, 1982

Marathon Oil Company
P. O. Box 2659
Casper, Wyoming 82602

RE: Well No. Tin Cup Mesa #1-23
Sec. 23, T. 38 S, R. 25 E
San Juan County, Utah

Insofar as this office is concerned, approval to drill the above referred to oil well is hereby granted in accordance with Section 40-6-11, Utah Code Annotated 1953; and predicated on Rule A-3, General Rules and Regulations and Rules of Practice and Procedure.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

RONALD J. FIRTH - Engineer			CLEON B. FEIGHT - Director
Office: 533-5771		OR	Office: 533-5771
Home: 571-6068			Home: 466-4455

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (acquifers) are encountered during drilling. Your cooperation in completing this form will be appreciated.

Further, it is requested that this Division be notified within 24 hours after drilling operations commence, and that the drilling contractor and rig number be identified.

The API number assigned to this well is 43-037-30800.

Sincerely,

Norman C. Stout
Administrative Assistant

NCS/as
cc: Minerals Management Service
Enclosure

Oil and Gas Operations
2000 Administration Building
1745 West 1700 South
Salt Lake City, Utah 84104

August 16, 1982

Marathon Oil Company
P. O. Box 2659
Casper, Wyoming 82602

Re: Application for Permit to Drill (APD)
Tin Cup Mesa No. 1-23
Section 23, T.38S., R.25E.
San Juan County, Utah
Lease U-13921

Gentlemen:

On August 13, 1982 this office approved the referenced APD.

Inadvertently the permit was altered to reflect a fifty (50) foot move to the north together with a fifty (50) degree pad rotation. Since the application submitted on August 2, 1982 already reflected this change, the alteration was not necessary.

Accordingly, please modify your approved copy of the referenced application to reflect NO changes.

Sincerely,

(ORIG. SGD.) W. P. MARTENS
Drilling Unit Supervisor
for E. W. Guynn
District Oil and Gas Supervisor

bcc: Well File
BLM, Monticello
State of Utah-DOGM
Vernal + corrected IWR

WPM/kr

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

NAME OF COMPANY: Marathon Oil Company

WELL NAME: Tin Cup Mesa 1-23

SECTION SESE 23 TOWNSHIP 38S RANGE 25E COUNTY San Juan

DRILLING CONTRACTOR Energy Search

RIG # 1

SPUDDED: DATE 8-22-82

TIME 12:00 AM

HOW Rotary

DRILLING WILL COMMENCE _____

REPORTED BY Walt West

TELEPHONE # 307-577-1555

DATE 8-23-82 SIGNED AS

DIVISION OF OIL, GAS AND MINING

BLOW OUT PREVENTION TEST

NAME OF COMPANY: Marathon Oil Co.

WELL NAME: Tin Cup Mesa 1-23

SECTION: 23 TOWNSHIP 38S RANGE 25E COUNTY: San Juan

DRILLING CONTRACTOR: Energy Search

RIG # 1

BOP TEST: DATE: 8/24/82

TIME: Mid-night, 8/23/82

DRILLING:

CASING:

H_2S:

REPORTED BY:

TELEPHONE NO.

DATE: 8/24/82 SIGNED C. B. Feight

Form 9–331
Dec. 1973

Form Approved.
Budget Bureau No. 42–R1424

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9–331–C for such proposals.)

1. oil well ☐ gas well ☐ other Drilling
2. NAME OF OPERATOR: Marathon Oil Company
3. ADDRESS OF OPERATOR: P.O. Box 2659, Casper, WY 82602
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
   AT SURFACE: 148.84' FSL & 1,189.33' FEL
   AT TOP PROD. INTERVAL:
   AT TOTAL DEPTH:
5. LEASE: U-13921
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT AGREEMENT NAME: Tin Cup Mesa Unit
8. FARM OR LEASE NAME: Tin Cup Mesa
9. WELL NO.: 1-23
10. FIELD OR WILDCAT NAME: Tin Cup
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Section 23, T38S, R25E
12. COUNTY OR PARISH: San Juan
13. STATE: Utah
14. API NO.: 43-037-30800
15. ELEVATIONS (SHOW DF, KDB, AND WD): 5,117' KB

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other) Please See Below			

RECEIVED
SEP 08 1982
DIVISION OF
OIL, GAS & MINING

(NOTE: Report results of multiple completion or zone change on Form 9–330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

PROGRESS REPORT

From: 8-22-82 To: 8-27-82

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED M. E. Krug / A.G. TITLE Drilling Superintendent DATE 9-3-82

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

TINCUP MESA #1-23

8-22-82 157' RU & SPUDDED @ 12:01 A.M., 8-22-82. MADE 87' IN CARMEL FORMATION. MW 8.6, VIS 41.

8-23-82 409' MADE 252' IN CARMEL FORMATION. MW 9.1, VIS 36.

8-24-82 1,030' MADE 778' IN NAVAJO FORMATION. MW 9.3, VIS 37.

8-25-82 1,370' MADE 340' IN WINGATE FORMATION. MW 9.2, VIS 45. REMARKS: DRLD TO 1,370'. CIRC & POH. RAN 35 JTS 9-5/8", 36#, K-55, STC CSG. DOWELL CMTED W/546 SX CMT. HAD GOOD CMT RETURNS TO SURFACE. BUMPED PLUG @ 0600 HRS, 8-25-82. PRESENTLY WOC.

8-26-82 1,370' MADE 0' IN WINGATE FORMATION. REMARKS: WOC TILL 6 P.M. CUTOFF CSG & WELD ON WKM WELLHEAD. RAN CSG AS FOLLOWS:

NO. JTS	SIZE	OVERALL LENGTH	EFFECTIVE LENGTH	SETTING FROM	DEPTH TO
	HOWCO FLOAT SHOE (BALL TYPE)	1.91'	1.91'	1350.21	1348.30
1 SHOE JT	9-5/8",36#,8RD,K-55, STC, R-3, C-1	40.53'	40.25'	1348.30	1308.05
	DOWELL FLT CLR (FLAPPER TYPE)	1.21'	.93'	1308.05	1307.12
34	9-5/8",36#,8RD,K-55 STC, R-3, C-1	1316.64'	1307.12'	1307.12	KB
35		1357.17'	1347.37'		

1ST STAGE: CMT'D CSG W/307 SX OF CLASS "B" W/2% CACL2 PLUS 1/4#/SK D-29 CELLOFLAKE FOLLOWED BY 239 SX OF CLASS "B" W/SAME. USED 100% EXCESS VOL, PMPD 0 GAL MUD FLUSH. THEN 10 BBLS WTR AHEAD. SLURRY WT 12.7#/GAL. 15#/GAL. MIXING TIME 25 MINUTES. PMPG TIME 26 MINUTES. DISPL PLUG W/WTR W/DOWELL PUMP. CALC DISPL VOL: 101 BBLS. ACTUAL DISPL VOL 101. MAX DISPL PRESS 750 PSI. BUMPED PLUG TO 1,000 PSI. PLUG DOWN @ 6 A.M., 8-25-82. GOOD RETURNS WHILE CMT'G. CIRC'D 51 BBLS CMT TO SURF. MIXING WTR WAS MEASURED BY PAUL MAZZOLINI.

8-27-82 1,563' MADE 193' IN WINGATE FORMATION. MW 8.4, VIS 27. RAN FORMATION TEST TO 13 PPG MUD EQUIV, OK.

M

NOTICE OF SPUD

Company: Marathon

Caller: Walt West

Phone: 307-577-1555

Well Number: 2-23

Location: Sec. 23 - 38S - 25E

County: San Juan State: Utah

Lease Number: U-31928

Lease Expiration Date: _____

Unit Name (If Applicable): Ismay Cane Mesa

Date & Time Spudded: 9-18-82 6:00 PM

Dry Hole Spudder/Rotary: _____

Details of Spud (Hole, Casing, Cement, etc.) _____

Rotary Rig Name & Number: Energy Search #1

Approximate Date Rotary Moves In: _____

FOLLOW WITH SUNDRY NOTICE

Call Received By: McLain

Date: 9-20-82

Form 9-331
Dec. 1973

Form Approved.
Budget Bureau No. 42-R1424

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well ☐ gas well ☐ other Plug & Abandon
2. NAME OF OPERATOR: Marathon Oil Company
3. ADDRESS OF OPERATOR: P.O. Box 2659, Casper, WY 82602
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
   AT SURFACE: 148.84' FSL & 1,189.33' FEL
   AT TOP PROD. INTERVAL:
   AT TOTAL DEPTH:
5. LEASE: U-13921
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT AGREEMENT NAME: Tin Cup Mesa Unit
8. FARM OR LEASE NAME: Tin Cup Mesa
9. WELL NO.: 1-23
10. FIELD OR WILDCAT NAME: Tin Cup
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Section 23, T38S, R25E
12. COUNTY OR PARISH: San Juan
13. STATE: Utah
14. API NO.: 43-037-30800
15. ELEVATIONS (SHOW DF, KDB, AND WD): 5,104' GL, 5,117' KB
16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other) Plug & Abandon			

RECEIVED
SEP 24 1982
DIVISION OF OIL, GAS & MINING

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Drilled 8-3/4" hole from 1,350' to 5,810'. Rigged up Dowell, laid plug #1 from 5,810' to 5,350' of 145 sacks of Class "B" cement with 1% Halad-9. Plug #2 was set from 4,425' to 4,225' using 70 sacks of Class "B" with 1% Halad-9. Plug #3 was set from 2,670' to 2,470' using 70 sacks of Class "B" with 1% Halad-9. Plug #4 was set from 1,450' to 1,250' using 75 sacks of Class "B" with 1% Halad-9. Plug #5 to be set at surface using 10 sacks of Class "B" cement with a 10' dry hole marker, 6' in cement and 4' above cement. Dry hole marker will include well name, operator, lease number, section, township, range, and date.

This procedure was approved verbally by W. P. Martens of MMS in Salt Lake City, Utah, on September 17, 1982, at 8:45 a.m.

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Dale T Caddy by JEarls TITLE District Operations Manager DATE September 21, 1982

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 9/27/82
BY: [signature]

*See Instructions on Reverse Side

Form 9-331
Dec. 1973

Form Approved.
Budget Bureau No. 42-R1424

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well ☐ gas well ☐ other Drilling
2. NAME OF OPERATOR
Marathon Oil Company
3. ADDRESS OF OPERATOR
P.O. Box 2659, Casper, WY 82602
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 148.84' FSL & 1,189.33' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

5. LEASE
U-13921
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME
Tin Cup Mesa Unit
8. FARM OR LEASE NAME
Tin Cup Mesa
9. WELL NO.
1-23
10. FIELD OR WILDCAT NAME
Tin Cup
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Section 23, T38S, R25E
12. COUNTY OR PARISH
San Juan
13. STATE
Utah
14. API NO.
43-037-30800
15. ELEVATIONS (SHOW DF, KDB, AND WD)
5,104' GL, 5,117' KB

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other) Please See Below			

RECEIVED
SEP 28 1982
DIVISION OF OIL, GAS & MINING

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

PROGRESS REPORT

From: 8-28-82 To: 9-9-82

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED M.E. Kingh TITLE Drilling Superintendent DATE 9-23-82

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

WALT MARATHON

307 577-1555 EXT 219

TIN CUP 1-23
23 385 25E

SAN JUAN
43 037- 30200

9-27-82

Ron

This one looks clean, so I signed. If you approve, Arlene should probably call the operator since they've indicated 8-15-82 as start date.

(The copy machine is down but copies will be made later)

8-6

OK
RAF

TINCUP MESA #1-23

8-28-82	2,207'	MADE 644' IN CHINLE FORMATION. MW 9.0, VIS 54. BIT NO 3, 8-3/4", HTC KZ140, OSC31A, JETS 12/11/B, DEPTH IN 1,370', DEPTH OUT 2,207', 837 FEET, 19-3/4 HRS, 42.4 FT/HR, CONDITION 5/F/I. DRLD 1,563' TO 2,207'. POH F/NEW BIT.
8-29-82	3,022'	MADE 815' IN CUTLER FORMATION. MW 10.1, VIS 48. RIH W/NEW BIT. DRLD 2,207' TO 3,022'.
8-30-82	3,424'	MADE 402' IN CUTLER FORMATION. MW 10.1, VIS 42. DRLD 3,022' TO 3,424'.
8-31-82	3,680'	MADE 256' IN CUTLER FORMATION. MW 9.8, VIS 47. BIT NO 4, 8-3/4", REED 919936, HS5IJ, JETS 12/14/B, DEPTH IN 2,207', DEPTH OUT 3,518', 1,311 FEET, 50-1/2 HRS, 26 FT/HR, CONDITION 4/F/I. DRLD 3,424-3,518'. POH. CHANGED BITS, RIH. DRLG AHEAD. TENTATIVE SAMPLE TOPS: CHINLE 1,570', SHINARUMP 2,360', MOENKOPI 2,430', CUTLER 2,570'.
9-1-82	3,924'	MADE 244' IN CUTLER FORMATION. MW 9.9, VIS 47. BIT NO 5, 8-3/4", STC CJ6517, F3, JETS 12/14/B, DEPTH IN 3,518', DEPTH OUT 3,732', 212 FEET, 15-1/2 HRS, 13.6 FT/HR, CONDITION 2/E/I. DRLD AHEAD. POH F/NEW BIT #6. POH, FOUND HOLE IN BOX OF 7TH DC DOWN F/TOP. DRLD AHEAD TO 3,907', HIGH TORQUE. WORKED TITE SPOT UNTIL OK. DRLG AHEAD @ 3,924'.
9-2-82	4,213'	MADE 289' IN CUTLER FORMATION. MW 10.0, VIS 53. DRLD 3,924'-4,213'.
9-3-82	4,454'	MADE 241' IN HONAKER TRAIL FORMATION. MW 10.3, VIS 54. BIT NO 6, 8-3/4", REED RB704893, H551, JETS 12/13/B, DEPTH IN 3,732', DEPTH OUT 553', 40-3/4 HRS, 13.5 FT/HR, CONDITION 3/F/I. DRLD AHEAD TO 4,285' & LOST 600 PSI PUMP PRESSURE. POH. HOLE IN 10TH CLR FROM TOP. CHANGE BIT. RIH. DRLG.
9-4-82	4,743'	MADE 289' IN HONAKER TRAIL. MW 10.1, VIS 42. DRLG AHEAD.
9-5-82	4,888'	MADE 145' IN HONAKER TRAIL FORMATION. MW 10.4, VIS 48. DRLG TO 4,789', LOST 600# PUMP PRESS. POH, SHOCK SUB PIN WASH OUT & TWISTED OFF WHILE BREAKING OUT. RIH. DRLD TO 4,888'.
9-6-82	5,118'	MADE 230' IN HONAKER TRAIL FORMATION. MW 10.4, VIS 39. DRLD TO 5,118'.
9-7-82	5,285'	MADE 167' IN HONAKER TRAIL FORMATION. MW 10.1, VIS 39. BIT NO RR#5, 8-3/4", STC, F3 CJ6517, JETS 12/14/B, DEPTH IN 4,285', DEPTH OUT 5,146', 861 FEET, 75 HRS, 11.5 FT/HR, CONDITION 4/F/1/8. DRLD TO 5,146'. POH, CHANGE BIT. RIH. DRLG AHEAD.
9-8-82	5,471'	MADE 186' IN ISMAY FORMATION. MW 10.1, VIS 48. DRLD TO 5,471'. CIRC & COND MUD. PREPARE TO CORE.
9-9-82	5,531'	MADE 60' IN ISMAY FORMATION. MW 10.1, VIS 44. BIT NO 7, 8-3/4", SEC 137843, S86F, JETS 12/12/10, DEPTH IN 5,146', DEPTH OUT 5,471', 324 FEET, 31 HRS, 10.5 FT/HR, CONDITION 2/E/I. CORE 5,471-5,531', CIRC BTMS UP. PRESENTLY CHAINING OUT OF HOLE W/CORE.

Form 9-331
Dec. 1973

Form Approved.
Budget Bureau No. 42-R1424

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well ☐ gas well ☐ other Drilling
2. NAME OF OPERATOR
Marathon Oil Company
3. ADDRESS OF OPERATOR
P.O. Box 2659, Casper, WY 82602
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: 148.84' FSL & 1,189.33' FEL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

5. LEASE
U-13921
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME
Tin Cup Mesa Unit
8. FARM OR LEASE NAME
Tin Cup Mesa
9. WELL NO.
1-23
10. FIELD OR WILDCAT NAME
Tin Cup
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Section 23, T38S, R25E
12. COUNTY OR PARISH
San Juan
13. STATE
Utah
14. API NO.
43-037-30800
15. ELEVATIONS (SHOW DF, KDB, AND WD)
5,104' GL, 5,117' KB

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other) Please See Below			

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

PROGRESS REPORT

From: 9-7-82 To: 9-18-82

RECEIVED
SEP 30 1982
DIVISION OF OIL, GAS & MINING

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct
SIGNED M E Brugh TITLE Drilling Superintendent DATE 9-23-82

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

TINCUP MESA #1-23

9-7-82	5,285'	MADE 167' IN HONAKER TRAIL FORMATION. MW 10.1, VIS 39. BIT NO RR#5, 8-3/4", STC, F3 CJ6517, JETS 12/14/B, DEPTH IN 4,285', DEPTH OUT 5,146', 861 FEET, 75 HRS, 11.5 FT/HR, CONDITION 4/F/1/8. DRLD TO 5,146'. POH, CHANGE BIT & PU SEC SS. RIH WASH TO BTM, NO FILL. DRLG AHEAD, NO PROBLEM.
9-8-82	5,471'	MADE 186' IN ISMAY FORMATION. MW 10.1, VIS 48. DRLD TO 5,471'. POH, PREPARE TO CORE.
9-9-82	5,531'	MADE 60' IN ISMAY FORMATION. MW 10.1, VIS 44. BIT NO 7, 8-3/4", SEC 137843, S86F, JETS 12/12/10, DEPTH IN 5,146', DEPTH OUT 5,471', 324 FEET, 31 HRS, 10.5 FT/HR, CONDITION 2/E/I. PU CORE BBL, CORE 5,471-5,531'. PRESENTLY CHAINING OUT OF HOLE W/CORE.
9-10-82	5,557'	MADE 26' IN ISMAY FORMATION. MW 10.0, VIS 47. LD CORE, RIH W/BIT. CIRC & COND MUD. POH, MU CORE BBL. RIH, CORED 5,531'-5,557', NO PROBLEM. 5,471-5,479' BLACK DOLOMITIC SHALE W/NODULAR ANNHYDRITE; 5,479-5,483' BLACK DOLOMITIC SHALE; 5,483-5,531' MASSIVE ANNYHDRITE GRADING TO BLACK SHALE AT BASE.
9-11-82	5,658'	MADE 101' IN LOWER ISMAY FORMATION. MW 10.2, VIS 41. CORED UPPER ISMAY. POH W/CORE BBL. PU BHA & RIH. DRLG AHEAD W/NO PROBLEMS. CORE #2 DISC 5,531' TO 5,572' (41') ANHYDRITE, 5,572'-5,576' (4') SAPROPELIC DOLOMITE, 5,576' TO 5,591' (15') LIMESTONE, NO SHOWS.
9-12-82	5,779'	MADE 121' IN DESERT CREEK FORMATION. MW 10.4, VIS 45. BIT NO 8, 8-3/4", REED 888996, FP53A, JETS 12/11/11, DEPTH IN 5,591', 5,753' DEPTH OUT, 162 FEET, 15 HRS, 10.8 FT/HR, CONDITION 2/E/I. DRLD TO 5,753'. POH F/CORE #3. RIH.
9-13-82	5,810'	MADE 31' IN AKAH FORMATION. MW 10.5, VIS 46. CORING & POH W/CORE #3. CORE 57' & RECOVER 57'. PU BHA & RIH. CIRC & COND F/DST #1. CORE #3 5,753'-5', 2' ANHYDRITE. 5,755'-76' DOLOMITE W/STAIN & ODOR. 5,776'-99' (23') CHIMNEY ROCK SHALE, 5,779'-5,808' (9') DOLOMITE SOME STAIN, 5,808'-5,810' (2') ANHYDRITE. TOP OF CHIMNEY ROCK 5,776'; TOP OF AKAH @ 5,779'.
9-14-82	5,810'	MADE 0' IN AKAH FORMATION. MW 10.8, VIS 50. CIRC & COND. PU HALLIBURTON DST TOOLS & RIH TO BTM SURF CSG. WO DAYLIGHT FIN RIH.
9-15-82	5,810'	MADE 0' IN AKAH FORMATION. MW 11.1, VIS 53. RIH W/DST #1. NU WC OPEN TOOL @ 6:50 A.M. IF 1/4 HR. GOOD BLOW IN BUCKET. ISI 1 HR, FF 2 HR. GOOD BLOW. FSI 4-1/2 HRS. NO GAS OR FLUID TO SURFACE. POH W/DST. HAD 25' OF OIL & GAS CUT MUD IN DC'S. SAMPLE CHAMBER 500 ML OF OIL & GAS, CUT MUD @ 20 PSI. TOP CHART IHP 3,307 PSI, IF 53 STEADY, ISI 396 FINAL READING, FF 40 STEADY, FSI 1185 FINAL READING, FHP 3,254. TOP CHART @ 5,732'. BOTTOM CHART @ 5,805', IHP 3,337 PSI, IF 80 STEADY, ISI 428 FINAL READING, FF 80 STEADY, FSI 1,223 FINAL, FHP 3.325. BHT 130°. RIH W/BIT. CIRC & POH F/LOGS.
9-16-82	5,810'	MADE 0' IN AKAH FORMATION. MW 11.2, VIS 46. RU SOS & RAN DIL, MSFL, COMP DENSITY, CNL, COMP SONIC & GR F/5,810'-1,350' IN 4 RUNS. LOGGERS TD @ 5,806'. MOVING PIPE CONTINUALLY. WOO.
9-17-82	5,810'	MADE 0' IN AKAH FORMATION. MW 11.0, VIS 46. CIRC & WOO.
9-18-82	5,810'	MADE 0' IN AKAH FORMATION. BIT NO 8RR, CONDITION 2/3/I. RIH W/OE DP. CIRC & DOWELL LAID PLUG #1 - 4,810'-5,350' W/145 SX CLASS "B" W/1% D-60 FLAC. POH, LAID PLUG #2 - 4,425'-4,225' W/70 SX SAME. POH, LAID PLUG #3 - 2,670'-2,470' W/70 SX SAME. POH, LAID PLUG #4 - 1,450'-1,250' W/75 SX SAME. FIN LD DP. CLEAN MUD TANKS & ND BOPE. RIG DOWN & MOVE TO TIN CUP MESA #2-23.

SANCO

API FORM 45-1

API WATER ANALYSIS REPORT FORM

Company: Marathon Oil Company		Sample No.: SL-2036		Date Recd: 1/28/83
Field: Tin Cup Mesa	Legal Description		County or Parish	State
Lease or Unit	Well: TC-1-25	Depth	Formation	Water, B/D
Type of Water (Produced, Supply, etc.)	Sampling Point			Sampled By

DISSOLVED SOLIDS

CATIONS	mg/l	me/l
Sodium, Na (calc.)	84900	3690
Calcium, Ca	13100	655
Magnesium, Mg	3040	249
Barium, Ba		

ANIONS		
Chloride, Cl	163,000	4590
Sulfate, SO_4	0.2	
Carbonate, CO_3		
Bicarbonate, HCO_3	107	1.80

Total Dissolved Solids (calc.) 264,000

Iron, Fe (total) 19.0

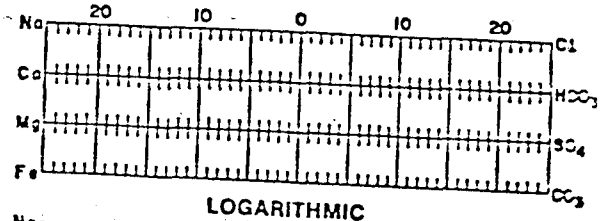
Sulfide, as H_2S

OTHER PROPERTIES

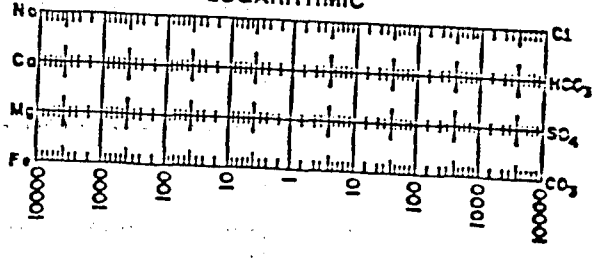
pH	5.92
Specific Gravity, 60/60 F.	1.172
Resistivity (ohm-meters) 77°F.	0.065
Total Hardness, as $CaCO_3$ mg/l	45100
Total Alkalinity, as $CaCO_3$ mg/l	87.5
Supersaturation, as $CaCO_3$ mg/l	

WATER PATTERNS — me/l

STANDARD



LOGARITHMIC



REMARKS & RECOMMENDATIONS:

COPIES TO: _____

5/24/83 Rec

ANALYSIS BY: _____

SANCO SERVICES INCORPORATED P. O. BOX 9877 CASPER, WYOMING 82609 (307) 235-7908

SANCO

API FORM 45-1

API WATER ANALYSIS REPORT FORM

Company: Marathon Oil Company		Sample No.: SL-2035		Date Recd.: 1/28/83
Field: Tin Cup Mesa	Legal Description		County or Parish	State
Lease or Unit	Well: TC-2-23	Depth	Formation	Water, B/D
Type of Water (Produced, Supply, etc.)	Sampling Point			Sampled By

DISSOLVED SOLIDS

CATIONS	mg/l	me/l
Sodium, Na (calc.)	64400	2800
Calcium, Ca	14800	740
Magnesium, Mg	875	7.2
Barium, Ba		

ANIONS		
Chloride, Cl	126,000	3550
Sulfate, SO_4	0.4	
Carbonate, CO_3		
Bicarbonate, HCO_3	107	1.8

Total Dissolved Solids (calc.): 206,000

Iron, Fe (total): 4.4

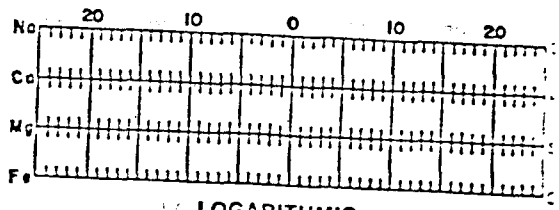
Sulfide, as H_2S:

OTHER PROPERTIES

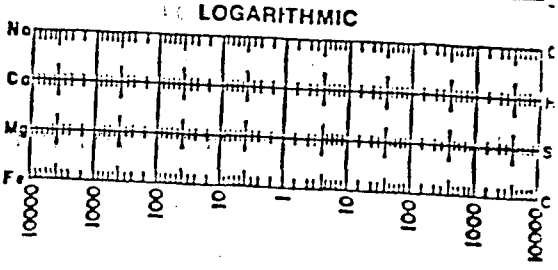
pH	6.03
Specific Gravity, 60/60 F.	1.16
Resistivity (ohm-meters) 77 °F.	0.08
Total Hardness as $CaCO_3$ mg/l	4050
Total Alkalinity, as $CaCO_3$ mg/l	87.5
Supersaturation, as $CaCO_3$ mg/l	

WATER PATTERNS — me/l

STANDARD



LOGARITHMIC



REMARKS & RECOMMENDATIONS:

COPIES TO:

$24.00
ROC

SANCO SERVICES INCORPORATED — P. O. BOX 9877 — CASPER, WYOMING 82609

ANALYSIS BY:

(307) 235-7908

SANCO

API FORM 45-1

API WATER ANALYSIS REPORT FORM

Company: Marathon Oil Comapany		Sample No.: SL-2037		Date Recd.: 1/28/83
Field: Tin Cup Mesa	Legal Description		County or Parish	State
Lease or Unit	Well: TC-3-23	Depth	Formation	Water, B/D
Type of Water (Produced, Supply, etc.)	Sampling Point			Sampled By

DISSOLVED SOLIDS

CATIONS

	mg/l	me/l
Sodium, Na (calc.)	75200	3270
Calcium, Ca	14300	715
Magnesium, Mg	3210	263
Barium, Ba		

ANIONS

Chloride, Cl	151,000	4250
Sulfate, SO_4	0.5	
Carbonate, CO_3		
Bicarbonate, HCO_3	<7.0	

Total Dissolved Solids (calc.): 244,000

Iron, Fe (total): 94.6

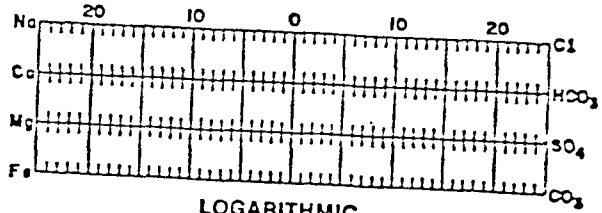
Sulfide, as H_2S:

OTHER PROPERTIES

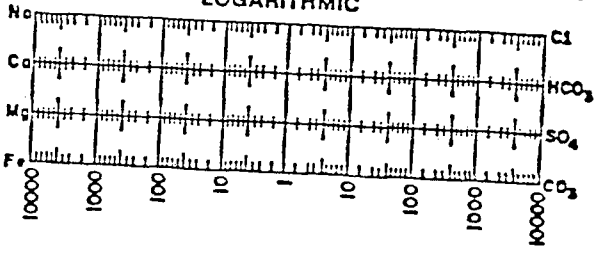
pH	4.50
Specific Gravity, 60/60 F.	1.171
Resistivity (ohm-meters) 77°F.	0.0660
Total Hardness, as $CaCO_3$ mg/l	48900
Total Alkalinity, as $CaCO_3$ mg/l	<6.0
Supersaturation, as $CaCO_3$ mg/l	

WATER PATTERNS — me/l

STANDARD



LOGARITHMIC



REMARKS & RECOMMENDATIONS:

COPIES TO:

2/24/83 pw

ANALYSIS BY:

SANCO SERVICES INCORPORATED
P. O. BOX 9877
CASPER, WYOMING 82609
(307) 235-7908

ORAL APPROVAL TO PLUG AND ABANDON WELL

Operator Marathon Oil Co. Representative

Well No. 1-23 Location SE¼ SE¼ Section 23 Township 38S Range 25E

County San Juan Field State Ut

Unit Name and Required Depth Tip Cup Mesa Base of fresh water sands

T.D. 5810' Size hole and Fill per sack 8 3/4" Mud Weight and Top #/gal. '

Casing Size	Set At	Top of Cement	To Be Pulled
9-5/8"	1347'	surface	

Formation	Top	Base	Shows

Plugging Requirements

From	To	Sacks Cement
5810	5350	145
4425	4225	70
2670	2410	70
1450	1250	75
@ Surface w/ marker		10
Drilling mud between plugs.		

REMARKS

DST's, lost circulation zones, water zones, etc., programs received from Mars, W.P. Martens 9/17/82

Approved by R.J. Firth Date 9/21/82 Time a.m. p.m.

STATE OF UTAH
NATURAL RESOURCES & ENERGY
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Cleon B. Feight, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

May 3, 1983

Marathon Oil Company
P. O. Box 2659
Casper, Wyoming 82602

Re: Well No. Tin Cup Mesa # 1-23
Sec. 23, T. 38S, R. 25E.
San Juan County, Utah

Gentlemen:

This letter is to advise you that the Well Completion or Recompletion Report and Log for the above mentioned well is due and has not been filed with this office as required by our rules and regulations.

Please complete the enclosed Form OGC-3, in duplicate, and forward them to this office as soon as possible.

We will be happy to acknowledge receipt of response to this notice if you will include an extra copy of the transmittal letter with a place for our signature, and a self addressed envelope for the return. Such acknowledgement should avoid unnecessary mailing of a firm second notice from our agency.

Your prompt attention to the above will be greatly appreciated.

Respectfully,

DIVISION OF OIL, GAS AND MINING

Cari Furse

Cari Furse
Well Records Specialist

CF/cf
Enclosure

Form 9-331
Dec. 1973

Form Approved.
Budget Bureau No. 42-R1424

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

CONFIDENTIAL

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well ☐ gas well ☐ other Abandoned Well Location
2. NAME OF OPERATOR: Marathon Oil Company
3. ADDRESS OF OPERATOR: P.O. Box 2659, Casper, WY 82602
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
   AT SURFACE: 148.84' FSL & 1,189.33' FEL
   AT TOP PROD. INTERVAL:
   AT TOTAL DEPTH:

5. LEASE: U-13921
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT AGREEMENT NAME: Tin Cup Mesa Unit
8. FARM OR LEASE NAME: Tin Cup Mesa
9. WELL NO.: 1-23
10. FIELD OR WILDCAT NAME: Tin Cup
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Section 23, T38S, R25E
12. COUNTY OR PARISH: San Juan
13. STATE: Utah
14. API NO.: 43-037-30800
15. ELEVATIONS (SHOW DF, KDB, AND WD): 5,104' GL, 5,117' KB

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:	SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF ☐	☐
FRACTURE TREAT ☐	☐
SHOOT OR ACIDIZE ☐	☐
REPAIR WELL ☐	☐
PULL OR ALTER CASING ☐	☐
MULTIPLE COMPLETE ☐	☐
CHANGE ZONES ☐	☐
ABANDON* ☐	☐
(other) Utilization of Reserve Pit	

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

PLEASE SEE ATTACHED

RECEIVED
MAY 16 1983
DIVISION OF
OIL, GAS & MINING

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 5/17/83
BY:

Operator to conform with BLM Stipulations

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Jesse E. O'Neal TITLE District Engineer DATE May 10, 1983

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

FORM 9-331
SUNDRY NOTICES AND REPORTS ON WELLS

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS:

The above-referenced well is plugged and abandoned, and a dry hole marker is in place. The location has not been restored.

We propose to temporarily use the reserve pit for a period of 90 days to dispose of approximately 60 barrels of produced water per day during testing of Tin Cup Mesa wells, in accordance with NTL-2B.

On May 6, 1983, an inspection of the pit and location was made by Mr. Brian Wood and Miss Tricia Powell, BLM, and Walt West of Marathon Oil, and it was determined that the pit is in excellent condition due to native clays and soils, is fenced on all four sides, and would facilitate our proposal.

If our request is approved, the pit will be properly flagged.

Please see attached copy of BLM inspection and approval.

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 6/27/83
BY:

United States Department of the Interior

File: 38-25-23 (U-069)

IN REPLY REFER TO:

BUREAU OF LAND MANAGEMENT
Moab District
San Juan Resource Area
P.O. Box 7
Monticello, Utah 84535

COMPLIANCE CHECK

Oil and Gas Well

Company: Marathon Date Inspected: 5-6-83

Well No.: Tin Cup 1-23

Status:
- ____ Construction
- ____ Drilling
- ____ Testing/Producing/TSI
- ✓ Dry Hole Awaiting Reclamation
- ____ Reclaiming
- ____ Abandoned

Items of non-compliance: None

Remarks: Met w/ Walt West to examine reserve pit for use as water disposal pit temporarily until permanent pit is built. Saw no leakage. Saw no problems. Told Walt to submit Sundry.

Recommendations: Contact ____ Monitor ✓

Other: ____

[signature] 5-6-83
Signature/Date

RECEIVED
MAY 11 1983
CASPER DISTRICT
OPERATIONS
GOVERNMENT COMPLIANCE

Form 9-330
(Rev. 5-63)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☒ Other Plugged & Abandoned

b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other

5. LEASE DESIGNATION AND SERIAL NO.: U-13921

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME: Tin Cup Mesa Unit

8. FARM OR LEASE NAME: Tin Cup Mesa

9. WELL NO.: 1-23

10. FIELD AND POOL, OR WILDCAT: Tin Cup

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Section 23, T38S, R25E

2. NAME OF OPERATOR: Marathon Oil Company

3. ADDRESS OF OPERATOR: P.O. Box 2659, Casper, WY 82602

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface 148.84' FSL & 1,189.33' FEL ✓SESE
At top prod. interval reported below
At total depth

14. PERMIT NO.: 43-037-30800 | DATE ISSUED: August 9, 1982

12. COUNTY OR PARISH: San Juan | 13. STATE: Utah

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
8-22-82	9-18-82	P & A	5,104' GL, 5,117' KB	--

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
5,810'	--	--	→	0'-5,810'	None

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: None

25. WAS DIRECTIONAL SURVEY MADE: No

26. TYPE ELECTRIC AND OTHER LOGS RUN: DLL-MSFL, ~~FDC-CNL~~, BHC Sonic

27. WAS WELL CORED: Yes

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9-5/8"	36#	1,348'	12-1/4"	546 sx	None
Abandoned in place					

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (*Interval, size and number*)
Plugged & Abandoned
Dry Hole Marker Set.

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
	Plugged and Abandoned	

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*)

TEST WITNESSED BY

35. LIST OF ATTACHMENTS: None

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Jesse to Oneal TITLE District Engineer DATE May 11, 1983

RECEIVED
MAY 17 1983
DIV. OF OIL, GAS & MINING

*(See Instructions and Spaces for Additional Data on Reverse Side)

CONF.

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.
If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.
Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.
Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.
Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.
Item 29: *"Sacks Cement":* Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.
Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

Cores: #1 5,471'-5,531'
#2 5,531'-5,591'
#3 5,753'-5,810'

DST: 5,750'-5,810', Rec. 25' OGCM, 500 ml OGCM in sample chamber, no gas or fluid to surface.

37. SUMMARY OF POROUS ZONES:
SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
Chinle	1,575'	2,374'	
Shinarump	2,374'	2,428'	
Moenkopi	2,428'	2,494'	
Cutler	2,494'	4,334'	
Honaker Trail	4,334'	5,274'	
Paradox	5,274'	5,429'	
U. Ismay	5,429'	5,578'	
Hovenweep	5,578'	5,616'	
L. Ismay	5,616'	5,663'	
Gothic	5,663'	5,682'	
Desert Creek	5,682'	5,757'	
Chimney Rock	5,757'	5,778'	
Akah	5,778'	5,810'	T.D.

38. GEOLOGIC MARKERS

NAME	TOP MEAS. DEPTH	TOP TRUE VERT. DEPTH
Chinle	1,575'	
Shinarump	2,374'	
Moenkopi	2,428'	
Cutler	2,494'	
Honaker Trail	4,334'	
Paradox	5,274'	
U. Ismay	5,429'	
Hovenweep	5,578'	
L. Ismay	5,616'	
Gothic	5,663'	
Desert Creek	5,682'	
Chimney Rock	5,757'	
Akah	5,778'	

U.S. GOVERNMENT PRINTING OFFICE: 1963—O-683836

GPO 680-147

Form 9-331
Dec. 1973

Form Approved.
Budget Bureau No. 42-R1424

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well ☐ gas well ☐ other Plugged & Abandoned
2. NAME OF OPERATOR: Marathon Oil Company
3. ADDRESS OF OPERATOR: P.O. Box 2659, Casper, WY 82602
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
   AT SURFACE: 148.84' FSL & 1,189.33' FEL
   AT TOP PROD. INTERVAL:
   AT TOTAL DEPTH:
5. LEASE: U-13921
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT AGREEMENT NAME: Tin Cup Mesa Unit
8. FARM OR LEASE NAME: Tin Cup Mesa
9. WELL NO.: 1-23
10. FIELD OR WILDCAT NAME: Tin Cup
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Section 23, T38S, R25E
12. COUNTY OR PARISH: San Juan
13. STATE: Utah
14. API NO.: 43-037-30800
15. ELEVATIONS (SHOW DF, KDB, AND WD): 5,104' GL, 5,117' KB
16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:	SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF ☐	☐
FRACTURE TREAT ☐	☐
SHOOT OR ACIDIZE ☐	☐
REPAIR WELL ☐	☐
PULL OR ALTER CASING ☐	☐
MULTIPLE COMPLETE ☐	☐
CHANGE ZONES ☐	☐
ABANDON* ☐	☐
(other) Confidentiality of Well Logs ☐	☐

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

RECEIVED
MAY 17 1983
DIVISION OF OIL, GAS & MINING

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

We request to maintain the confidentiality of the LOGS on the above captioned well for the entire period of time as prescribed by Federal and State Law.

We plan additional drilling, and the nature of the prospect is such that divulging information at this time could be detrimental to our program.

Thank you for your time on this matter.

CONFIDENTIAL

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Jesse E. O'Neal TITLE District Engineer DATE May 12, 1983

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

Copies to: Norman C. Stout
Administrative Assistant
Utah Oil, Gas & Mining

*See Instructions on Reverse Side

Form 9-331
Dec. 1973

Form Approved.
Budget Bureau No. 42-R1424

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well ☐ gas well ☐ other Abandoned Well Location
2. NAME OF OPERATOR: Marathon Oil Company
3. ADDRESS OF OPERATOR: P.O. Box 2659, Casper, WY 82602
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
   AT SURFACE: 148.84' FSL & 1,189.33' FEL
   AT TOP PROD. INTERVAL:
   AT TOTAL DEPTH:

5. LEASE: U-13921
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT AGREEMENT NAME: Tin Cup Mesa
8. FARM OR LEASE NAME: Tin Cup Mesa
9. WELL NO.: 1-23
10. FIELD OR WILDCAT NAME: Tin Cup
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Section 23, T38S, R25E
12. COUNTY OR PARISH: San Juan
13. STATE: Utah
14. API NO.: 43-037-30800
15. ELEVATIONS (SHOW DF, KDB, AND WD): 5,104' GL

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other) Utilization of Location & Reserve Pit			

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

PLEASE SEE ATTACHED

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 6/18/83
BY:

RECEIVED
JUN 23 1983
CASPER DISTRICT
OPERATIONS
GOVERNMENT COMPLIANCE

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED _____ TITLE Acting District Manager DATE May 24, 1983

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE JUN 20 1983
CONDITIONS OF APPROVAL, IF ANY:

FOR E. W. GUYNN
DISTRICT OIL & GAS SUPERVISOR

*See Instructions on Reverse Side

OPERATOR

Form 9-331
Tin Cup Mesa #1-23
San Juan County, Utah

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS:

We propose to build a produced water disposal pit at the Tin Cup Mesa #1-23 dry hole well site. Please see the attached surveyor's plat.

Currently produced water would have to be trucked long distances at great expense to be disposed of. There are no known disposal sites in the immediate area. This pit would allow for more economical disposal of the water and would make possible the disposal of the water even when road conditions would not allow for water hauling.

The proposed 5' deep pit will be 400' x 250' (100,000 ft^2) floor dimension with a wall slope of 2:1, which would give a surface area of 420' x 270' (113,400 ft^2). Total storage capacity at 3' depth will be 306,653 ft^3 (7.04 acre-ft). The crown width will be 12'.

The pit dimensions are based upon a yearly average precipitation rate of 9.0 in/yr and a yearly average dry pan evaporation rate of 72.6 in/yr. This information was supplied by the U.S.G.S. and B.L.M.

The design was based upon worst case assumptions of (1) no evaporation during 6 months of winter, (2) all precipitation occurs during 6 winter months, (3) design disposal water rate 30% higher than actual, and (4) only 3' of the 5' depth will be utilized at peak storage.

The pit will safely store all precipitation and produced water for the 6 month winter; in addition, evaporation rates show the theoretical time to completely evaporate the pit to be approximately 3 months. Therefore, the pit should be dry by the end of each summer.

The proposed site is the current site of the Tin Cup Mesa #1-23 dry hole. The existing pad, reserve pit, and dry hole marker will need to be removed and top soil relocated as BLM directs. On May 6, 1983, Marathon employees W. West, R. Cottle, and F. Kastner met with BLM representatives B. Wood and T. Powell at the proposed site to lay out the pit (see attached plat). The removal of the well marker was discussed and direction given to remove the marker 6' below the pit floor pending approval.

Attached are water analyses from the following producing wells: Tin Cup Mesa #2-23, Tin Cup Mesa #1-25, and Tin Cup Mesa #3-23, from which produced waters will be disposed of in the pit.

The entire construction of the pit will be in accordance with NTL-2B.

ROC 5/24/83

Scale 1" = 60'

BB

5112.3

5091.6

LEVEL

SLOPE

Limit of Existing Well Pad

Dry Hole

(Elev 5107)

AA

AA

Section 23 / Section 26

Bottom of Existing Pit

SLOPE

LEVEL

SLOPE

5106.2

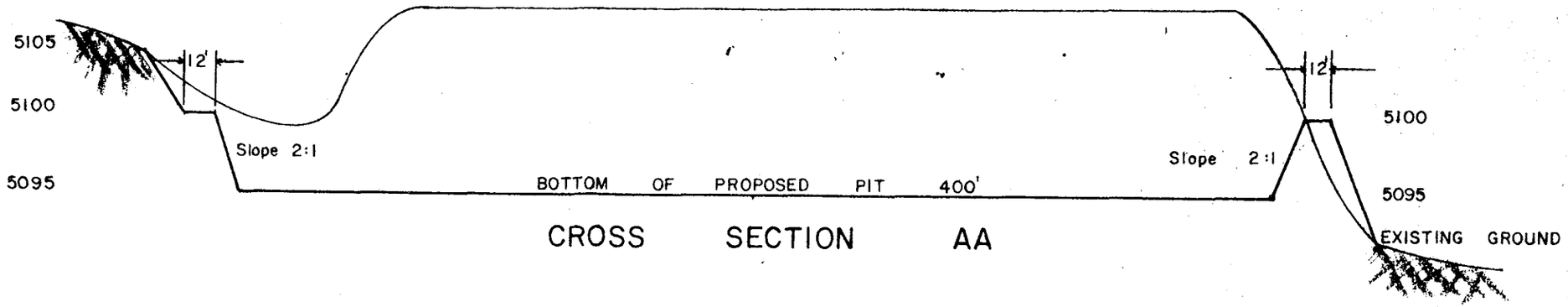
5091.3

N 84°49'E
1065.9' To NE
Cor. Sec. 26

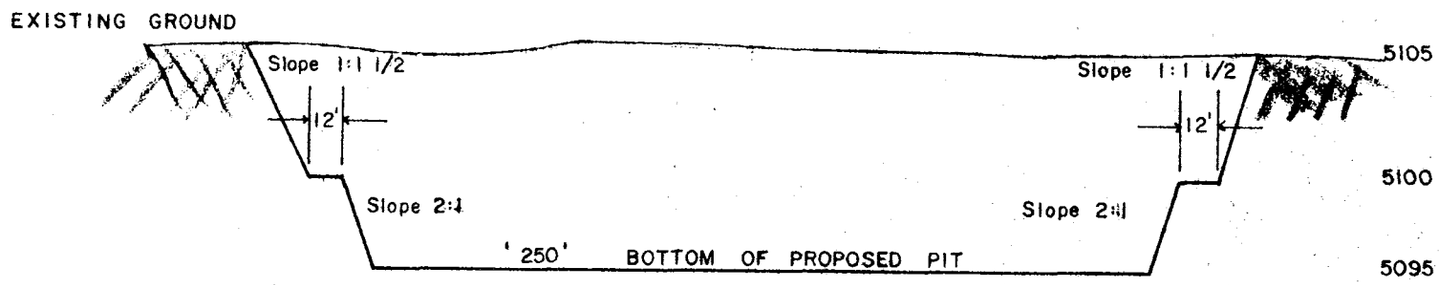
BB

Above Ground Gas Valve

℄ Existing Acess Road



CROSS SECTION AA



CROSS SECTION BB

FIGURE
'A'

I hereby certify the above plat represents a survey made under my supervision and that it is accurate to the best of my knowledge and belief.

Frederick H. Reed

FREDERICK H. REED
Registered Land Surveyor

MARATHON OIL COMPANY
Casper, Wyoming

TIN CUP MESA
PROPOSED PIT SITE
SECTION 23, T 38 S., R.25 E.
SECTION 26, T. 38 S., R.25 E.
San Juan County, Utah

Basis of Bearing — Solar Observation

SHEET 1

CLARK-REED & ASSOC,INC.
Durango, Colorado

DATE MAY 12, 1983
File No 83017

Marathon Oil Company
Well No. 1-23
Produced Water Disposal Pit
Section 23, T. 8 S., R. 25 E.
San Juan County, Utah
Lease U-13921

Supplemental Stipulations

1) Operator must obtain approval from the State of Utah Water Pollution Control Committee before building the pit.

2) The BLM, Monticello, Utah will be notified 48 hours before construction begins and ends (801-587-2201).

3) The pit will have a curvilinear shape instead of straight lines to provide a more natural appearance.

4) The top six inches of soil material and all previously stockpiled soil will be removed from the location before construction begins.

5) The outside pit banks will have a gentle enough slope so that the reserved topsoil can be placed on the banks. The banks will then be harrowed with the contour and seeded with:

   2 lbs/acre Indian ricegrass
   2 lbs/acre Fourwing saltbush
   1 lb/acre Shadscale
   1 lb/acre Curleygrass
   1 lb/acre Alkali sacaton
   1 lb/acre Globemallow

6) A "NO DUMPING Without Permission of Marathon Oil and BLM" sign will be posted at the pit.

Form 9-331
Dec. 1973

Form Approved.
Budget Bureau No. 42-R1424

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BUREAU OF LAND MANAGEMENT
SERVICE
CASPER OPERATIONS
RECEIVED
MAY 27 1983
SALT LAKE CITY, UTAH

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well ☐ gas well ☐ other Abandoned Well Location
2. NAME OF OPERATOR: Marathon Oil Company
3. ADDRESS OF OPERATOR: P.O. Box 2659, Casper, WY 82602
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
   AT SURFACE: 148.84' FSL & 1,189.33' FEL
   AT TOP PROD. INTERVAL:
   AT TOTAL DEPTH:
5. LEASE: U-13921
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT AGREEMENT NAME: Tin Cup Mesa
8. FARM OR LEASE NAME: Tin Cup Mesa
9. WELL NO.: 1-23
10. FIELD OR WILDCAT NAME: Tin Cup
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Section 23, T38S, R25E
12. COUNTY OR PARISH: San Juan
13. STATE: Utah
14. API NO.: 43-037-30800
15. ELEVATIONS (SHOW DF, KDB, AND WD): 5,104' GL
16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other) Utilization of Location & Reserve Pit			

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

PLEASE SEE ATTACHED

RECEIVED
JUN 23 1983
CASPER DISTRICT
OPERATIONS
GOVERNMENT COMPLIANCE

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED _____ TITLE Acting District Manager DATE May 24, 1983

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE JUN 20 1983
CONDITIONS OF APPROVAL, IF ANY:

FOR E. W. GUYNN
DISTRICT OIL & GAS SUPERVISOR

*See Instructions on Reverse Side

OPERATOR

Marathon Oil Company
Well No. 1-23
Produced Water Disposal Pit
Section 23, T. 8 S., R. 25 E.
San Juan County, Utah
Lease U-13921

Supplemental Stipulations

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1 lb/acre Curleygrass
1 lb/acre Alkali sacaton
1 lb/acre Globemallow

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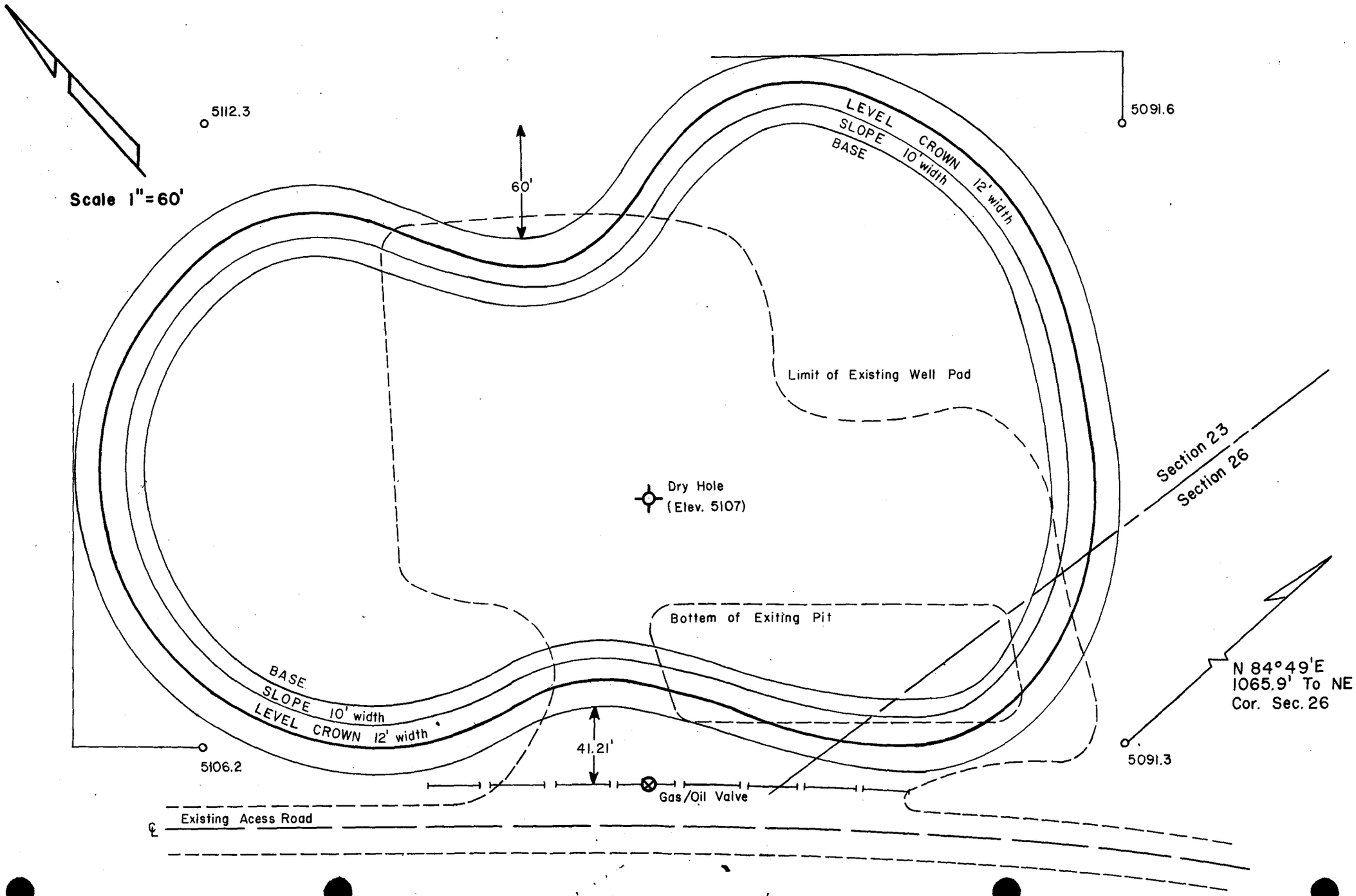
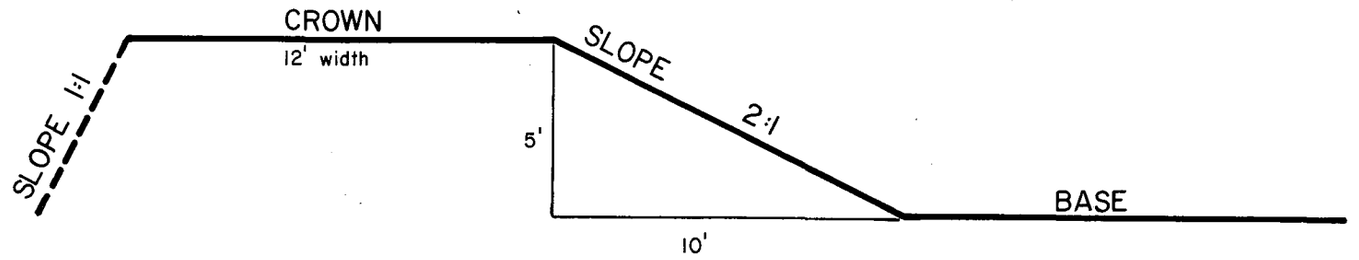

Scale 1"=60'
5112.3
5091.6
60'
LEVEL CROWN 12' width
SLOPE 10' width
BASE
Limit of Existing Well Pad
Dry Hole
(Elev. 5107)
Section 23
Section 26
Bottem of Exiting Pit
N 84°49'E
1065.9' To NE
Cor. Sec. 26
5091.3
BASE
SLOPE 10' width
LEVEL CROWN 12' width
5106.2
41.21'
Gas/Oil Valve
℄ Existing Acess Road



PIT SLOPE / BASE CROSS SECTION

MARATHON OIL COMPANY
Casper, Wyoming

TIN CUP MESA
PROPOSED PIT SITE
SECTION 23, T 38 S., R 25 E
SECTION 26, T 38 S., R 25 E
San Juan County, Utah

BY: R. Cottle

DATE: August 8, 1983

Form 9–331
Dec. 1973

Form Approved.
Budget Bureau No. 42–R1424

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9–331–C for such proposals.)

1. oil well ☐ gas well ☐ other Abandoned Well Location
2. NAME OF OPERATOR: Marathon Oil Company
3. ADDRESS OF OPERATOR: PO Box 2659, Casper WY 82602
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
   AT SURFACE: 148.84' FSL & 1,189.33' FEL
   AT TOP PROD. INTERVAL:
   AT TOTAL DEPTH:

5. LEASE: U-13921 ✓
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT AGREEMENT NAME: Tin Cup Mesa
8. FARM OR LEASE NAME: Tin Cup Mesa
9. WELL NO.: 1-23
10. FIELD OR WILDCAT NAME: Tin Cup
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Section 23, T38S, R25E
12. COUNTY OR PARISH: San Juan
13. STATE: Utah
14. API NO.: 43-037-30800
15. ELEVATIONS (SHOW DF, KDB, AND WD): 5,104' GL

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF	☐	☐
FRACTURE TREAT	☐	☐
SHOOT OR ACIDIZE	☐	☐
REPAIR WELL	☐	☐
PULL OR ALTER CASING	☐	☐
MULTIPLE COMPLETE	☐	☐
CHANGE ZONES	☐	☐
ABANDON*	☐	☐
(other) Utilization of Location & Reserve Pit ✓		

(NOTE: Report results of multiple completion or zone change on Form 9–330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Attached for your approval is a schematic for disposal pit, to comply with your stipulation #3, Sundry Notice approved June 20, 1983.

Attachment

RECEIVED
OCT 6 1983
DIVISION OF
OIL, GAS & MINING

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED Doyle F Jones TITLE District Operations Manager DATE October 4, 1983

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Dr. G. A. (Jim) Shirazi, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

November 9, 1983

Marathon Oil Company
P.O. Box 2659
Casper, Wyoming 82602

RE: Well No. Tin Cup Mesa #1-23
API # 43-037-30800
Sec. 23, T. 38S, R. 25E.
San Juan County, Utah

Well No. Tin Cup Mesa #2-23
API #43-037-30808
Sec. 23, T. 38S, R. 25E.
San Juan County, Utah

Gentlemen:

According to our records, "Well Completion Reports" filed with this office May 11, 1983 and February 9, 1983, from the above referred to wells, indicate that both of these wells were cored. However, to date this office has not received the results of these core tests.

Rule C-5, General Rules and Regulations and Rules of Practice and Procedure requires that this test data be reported to the Commission.

We will be happy to acknowledge receipt of your response to this notice if you will include an extra copy of the transmittal letter with a place for our signature, and a self addressed envelope for the return. Such acknowledgement should avoid unnecessary mailing of a second notice from our agency.

Your prompt attention to the above will be greatly appreciated.

Respectfully,

DIVISION OF OIL, GAS AND MINING

Claudia Jones

Claudia Jones
Well Records Specialist

CJ/cj

Casper Division
Production United States

Marathon Oil Company

P.O. Box 2659
Casper, Wyoming 82602
Telephone 307/577-1555

November 21, 1983

State of Utah
Natural Resources
Oil, Gas & Mining
4241 State Office Building
Salt Lake City, Utah 84114

ATTN: Claudia Jones

RE: Core Data for API #43-037-30800
and
API #43-037-30808

Dear Ms. Jones:

Per your letter of November 9, 1983, I am enclosing copies of the results of the core tests run on the following wells:

Well No. Tin Cup Mesa #1-23
API #43-037-30800
Section 23, T.38S., R.25E.
San Juan County, Utah

File

Well No. Tin Cup Mesa #2-23
API #43-037-30808
Section 23, T.38S., R.25E.
San Juan County, Utah

Would you please acknowledge the receipt of this material by signing as indicated on the copy of this letter and returning it in the enclosed envelope.

I am sorry for any inconvenience we may have caused the State by being late with this information.

Thank you for your cooperation in this matter.

Sincerely,

Carl L. Bassett

Carl L. Bassett
Landman

CLB/krj

cc: W. West
Attachments

RECEIVED
NOV 25 1983
DIVISION OF
OIL, GAS & MINING

State of Utah
Oil, Gas & Mining
By: Claudia Jones
Claudia Jones
Well Record Specialist

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

CORE ANALYSIS REPORT

FOR

MARATHON OIL COMPANY

#1-23 TIN CUP MESA
WILDCAT
SAN JUAN, UTAH

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

MARATHON OIL COMPANY
#1-23 TIN CUP MESA
WILDCAT
SAN JUAN, UTAH

DATE : 07-SEP-82
FORMATION : AS NOTED
DRLG. FLUID: WATER BASE MUD
LOCATION : SE SE SEC.23-38S-25E

FILE NO : RP-3-003229
ANALYSTS : GG/DS
ELEVATION: 5117 KB

FULL DIAMETER ANALYSIS--BOYLE'S LAW POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	PERM. TO AIR (MD) 90 DEG	POR. He	FLUID SATS. OIL	FLUID SATS. WTR	GRAIN DEN	DESCRIPTION
	ISMAY FORMATION							
	5471.0-74.0							LM/SHL - NO ANALYSIS
	5474.0-77.0							LM/ANHY - NO ANALYSIS
	5477.0-82.0							LM/SHL - NO ANALYSIS
	5482.0-83.0							LM/ANHY - NO ANALYSIS
	5483.0-31.0							ANHYDRITE - NO ANALYSIS
	5531.0-72.0							ANHYDRITE - NO ANALYSIS
1	5572.0-73.0	<0.01	<0.01	6.3	4.8	57.1		DOL BRN RTHY SL/LM SL/SHY
2	5573.0-74,0	0.31	0.21	8.0	0.0	83.0	2.77	DOL BRN RTHY SL/LM VF **
3	5574.0-75.0	<0.01	*	1.4	0.0	71.3	2.70	LM BRN RTHY SL/DOL
4	5575.0-76.0	<0.01	*	1.0	0.0	23.9	2.73	LM BRN/GY VFXLN SL/DOL
5	5576.0-77.0	6.40	0.22	0.8	0.0	34.5	2.73	LM GY VFXLN FOSS
6	5577.0-78.0	0.06	0.01	0.5	0.0	30.4	2.73	LM GY VFXLN FOSS
7	5578.0-79.0	<0.01	*	2.0	0.0	47.1	2.74	LM GY VFXLN FOSS
8	5579.0-80.0	<0.01	*	0.6	0.0	28.4	2.71	LM GY/BRN VFXLN FOSS SL/DOL
9	5580.0-81.0	<0.01	*	3.1	0.0	64.7	2.75	LM BRN VFXLN DOL FOSS
10	5581.0-82.0	<0.01	*	5.0	0.0	51.8	2.76	DOL BRN RTHY SL/LM STY
11	5582.0-83.0	0.01	*	4.3	0.0	41.1	2.75	DOL BRN RTHY SL/LM
12	5583.0-84.0	<0.01	*	3.9	2.2	66.5	2.78	DOL BRN RTHY SL/LM
13	5584.0-85.0	0.16	*	8.3	0.0	74.3	2.81	DOL BRN RTHY SL/LM
14	5585.0-86.0	0.17	*	11.2	0.7	56.9	2.81	DOL BRN RTHY SL/LM
15	5586.0-87.0	0.89	0.50	1.5	0.0	30.2	2.80	LM GY VFXLN ANHY
16	5587.0-88.0	0.30	0.24	2.1	0.0	23.9	2.80	LM GY VFXLN ANHY
17	5588.0-89.0	0.42	0.38	1.6	10.7	21.4	2.80	LM GY VFXLN ANHY
18	5589.0-90.0	1.10	0.66	2.0	0.0	34.0	2.81	LM GY VFXLN ANHY
19	5590.0-91.0	2.80	1.30	4.7	0.9	44.5	2.83	LM GY/BRN VFXLN ANHY DOL **

MARATHON OIL COMPANY
#1-23 TIN CUP MESA

DATE : 07-SEP-82
FORMATION : AS NOTED

FILE NO : RP-3-003229
ANALYSTS : GG/DS

FULL DIAMETER ANALYSIS--BOYLE'S LAW POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION	
	5591.0-53.0							DRILLED INTERVAL	
	DESERT CREEK FORMATION								
	5753.0-55.0							ANHYDRITE--NO ANALYSIS	
20	5755.0-56.0	0.11	0.01	8.3	10.7	64.5	2.76	DOL BRN VFXLN LM	
21	5756.0-57.0	0.01	<0.01	8.8	26.8	47.6	2.73	DOL BRN RTHY LM	
22	5757.0-58.0	3.30	2.80	13.1	35.5	40.6	2.75	DOL BRN RTHY LM	**
23	5758.0-59.0	0.49	0.31	8.4	38.8	18.5	2.75	DOL BRN RTHY LM	
24	5759.0-60.0	0.19	0.19	8.2	37.9	18.9	2.76	DOL BRN RTHY LM	
25	5760.0-61.0	0.12	0.11	8.2	33.5	35.9	2.76	DOL BRN RTHY LM	
26	5761.0-62.0	0.16	0.16	8.6	37.4	32.4	2.80	DOL BRN RTHY LM	
27	5762.0-63.0	0.10	0.06	8.0	36.2	29.4	2.77	DOL BRN RTHY LM	
28	5763.0-64.0	0.21	0.13	13.6	29.9	28.0	2.75	DOL BRN RTHY LM	
29	5764.0-65.0	0.09	*	14.1	35.5	30.9	2.75	DOL BRN RTHY LM	
30	5765.0-66.0	<0.01	*	9.5	13.3	74.1	2.76	DOL BRN RTHY LM	
31	5766.0-67.0	<0.01	*	7.1	2.6	68.0	2.67	DOL BRN VFXLN SHY	
32	5767.0-68.0	0.01	*	6.0	2.7	80.4	2.74	LM BRN RTHY DOL	
33	5768.0-69.0	0.49	0.07	3.5	4.8	67.8	2.70	LM BRN RTHY DOL	
34	5769.0-70.0	0.03	0.01	4.9	32.3	43.0	2.72	LM BRN RTHY DOL	
35	5770.0-71.0	0.03	0.01	4.5	5.8	75.4	2.74	LM BRN RTHY DOL	
36	5771.0-72.0	0.02	<0.01	3.1	37.1	41.2	2.72	LM BRN RTHY DOL	
37	5772.0-73.0	0.01	<0.01	3.9	29.1	38.8	2.73	LM BRN RTHY DOL	
38	5773.0-74.0	0.01	0.01	3.8	33.1	37.9	2.73	LM BRN RTHY DOL	
39	5774.0-75.0	0.01	<0.01	3.3	20.2	56.5	2.72	LM BRN RTHY DOL	
40	5775.0-76.0	0.01	<0.01	4.0	39.5	46.1	2.72	LM BRN RTHY DOL SL/SHY	
	5776.0-93.0							SHALE - NO ANALYSIS	
	5793.0-97.0							RUBBLE - NO ANALYSIS	
	5797.0-08.0							LM/SHL - NO ANALYSIS	
	5808.0-10.0							ANHYDRITE - NO ANALYSIS	

MARATHON OIL COMPANY
#1-23 TIN CUP MESA

DATE : 07-SEP-92
FORMATION : AS NOTED

FILE NO : RP-3-003229
ANALYSTS : CG/DS

FULL DIAMETER ANALYSIS--BOYLE'S LAW POROSITY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	PERM. TO AIR (MD) 90 DEG	POR. He	FLUID SATS. OIL	FLUID SATS. WTR	GRAIN DEN	DESCRIPTION

** FRACTURE PERMEABILITY

* SAMPLE NOT SUITABLE FOR FULL DIAMETER ANALYSIS

PERMEABILITY VS POROSITY

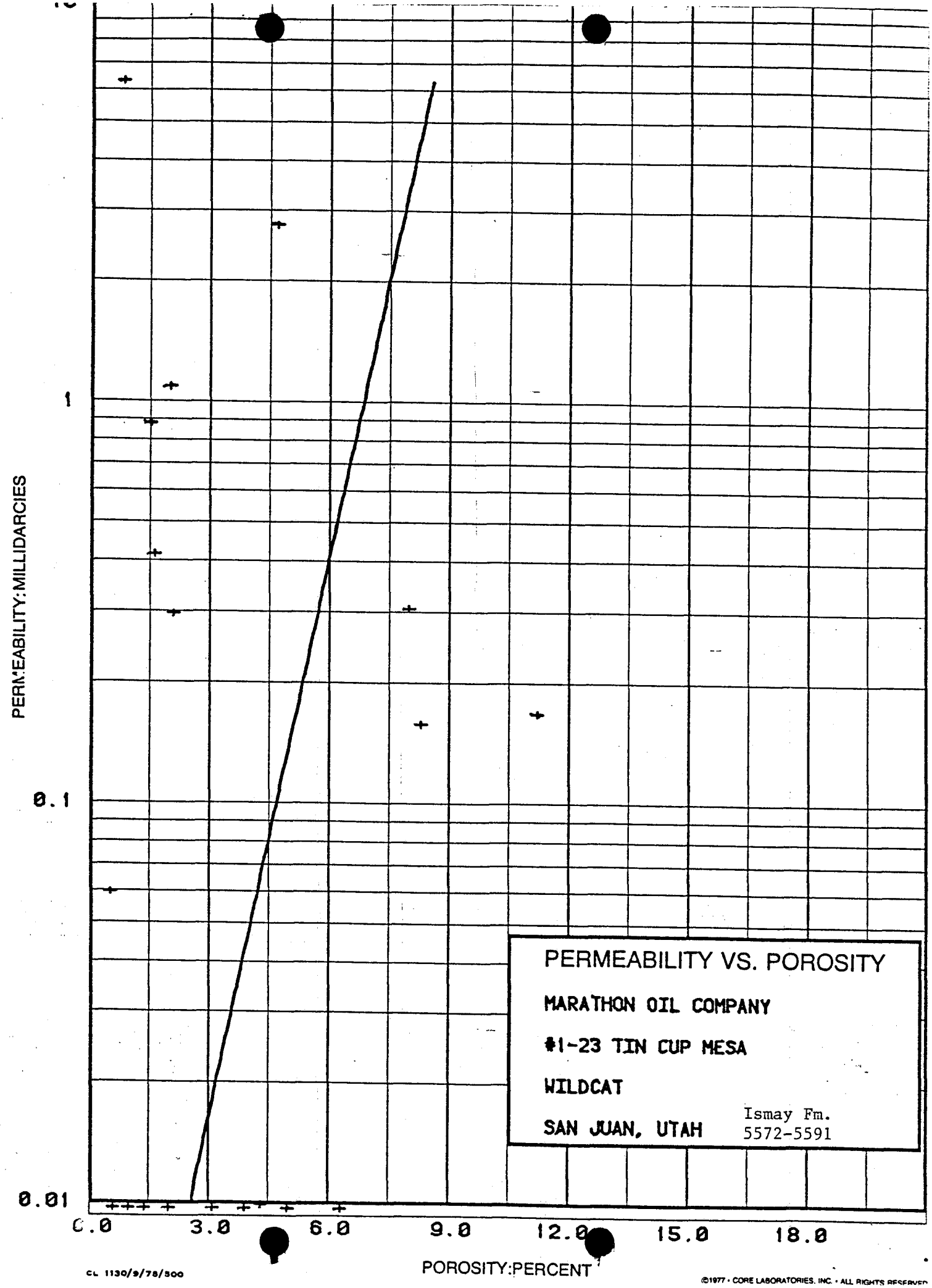
COMPANY: MARATHON OIL COMPANY
FIELD : WILDCAT
WELL : #1-23 TIN CUP MESA
COUNTY, STATE: SAN JUAN, UTAH

AIR PERMEABILITY : MD - HORIZONTAL (UNCORRECTED FOR SLIPPAGE)
POROSITY : PERCENT (HELIUM)

DEPTH INTERVAL	RANGE & SYMBOL	PERMEABILITY MINIMUM	PERMEABILITY MAXIMUM	POROSITY MIN.	POROSITY MAX.	POROSITY AVERAGE	PERMEABILITY AVERAGES ARITHMETIC	HARMONIC	GEOMETRIC
5572.0 - 5591.0	1 (+)	0.001	6.5	0.4	11.5	3.6	0.66	0.00	0.03

EQUATION OF REDUCED LINE RELATING PERMEABILITY(K) TO POROSITY :
LOG(K) = (SLOPE)(POROSITY) + LOG OF INTERCEPT
K = ANTILOG((SLOPE)(POROSITY) + LOG OF INTERCEPT)

RANGE	EQUATION OF THE LINE
1	PERM = ANTILOG((0.4689)(POROSITY) + -3.2094)



CL 1130/9/78/500

PERMEABILITY VS POROSITY

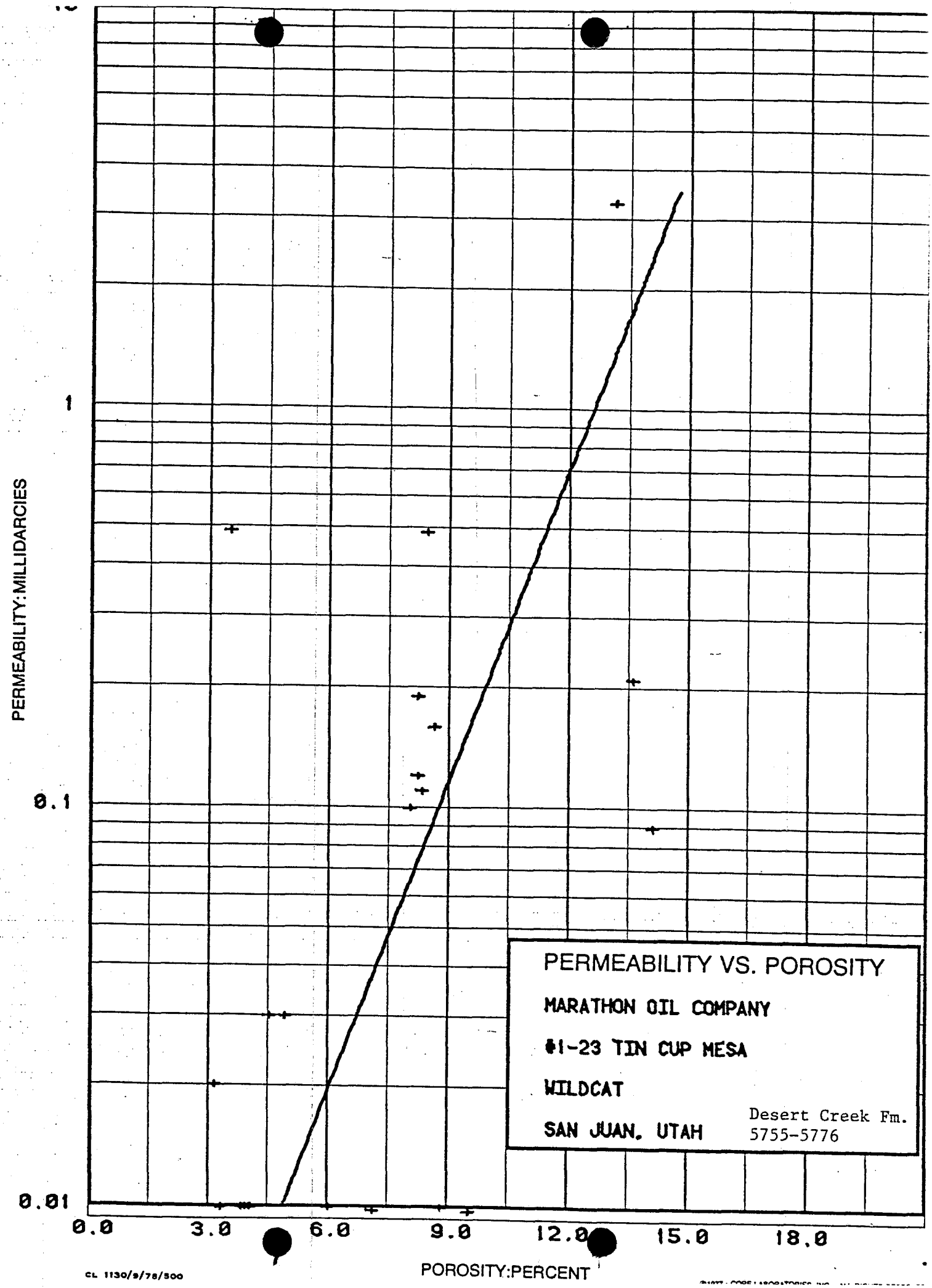
COMPANY: MARATHON OIL COMPANY
FIELD : WILDCAT
WELL : #1-23 TIN CUP MESA
COUNTY, STATE: SAN JUAN, UTAH

AIR PERMEABILITY : MD - HORIZONTAL (UNCORRECTED FOR SLIPPAGE)
POROSITY : PERCENT (HELIUM)

DEPTH INTERVAL	RANGE & SYMBOL	PERMEABILITY MINIMUM	PERMEABILITY MAXIMUM	POROSITY MIN.	POROSITY MAX.	POROSITY AVERAGE	PERMEABILITY AVERAGES ARITHMETIC	HARMONIC	GEOMETRIC
5755.0 - 5776.0	1 (+)	0.001	3.5	3.0	14.5	7.3	0.26	0.01	0.04

EQUATION OF REDUCED LINE RELATING PERMEABILITY(K) TO POROSITY :
LOG(K) = (SLOPE)(POROSITY) + LOG OF INTERCEPT
K = ANTILOG((SLOPE)(POROSITY) + LOG OF INTERCEPT)

RANGE	EQUATION OF THE LINE
1	PERM = ANTILOG((0.2592)(POROSITY) + -3.2666)


PERMEABILITY:MILLIDARCIES
1
0.1
0.01
0.0
3.0
6.0
9.0
12.0
15.0
18.0
POROSITY:PERCENT
PERMEABILITY VS. POROSITY
MARATHON OIL COMPANY
#1-23 TIN CUP MESA
WILDCAT
SAN JUAN, UTAH
Desert Creek Fm.
5755-5776
CL 1130/9/78/500

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MARATHON OIL COMPANY — WELL : #1-23 TIN CUP MESA
FIELD : WILDCAT — COUNTY, STATE: SAN JUAN, UTAH

AIR PERMEABILITY	: MD.	(HORIZONTAL)	RANGE USED	0.001 TO	7.
POROSITY	: PERCENT	(HELIUM)	RANGE USED	0.0 TO	46.0

(PERMEABILITY UNCORRECTED FOR SLIPPAGE)

DEPTH LIMITS	: 5572.0 - 5591.0	INTERVAL LENGTH :	19.0
FEET ANALYZED IN ZONE	: 19.0	LITHOLOGY EXCLUDED :	NONE

DATA SUMMARY

POROSITY	PERMEABILITY AVERAGES		
AVERAGE	ARITHMETIC	HARMONIC	GEOMETRIC
3.6	0.66	0.00	0.03

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MARATHON OIL COMPANY
FIELD : WILDCAT

WELL : #1-23 TIN CUP MESA
COUNTY, STATE: SAN JUAN, UTAH

GROUPING BY POROSITY RANGES

POROSITY RANGE	FEET IN RANGE	AVERAGE POROSITY	AVERAGE PERM. (GEOM.)	(ARITH)	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
0.0 - 2.0	7.0	1.1	0.077	1.1	36.8	36.8
2.0 - 4.0	5.0	2.6	0.033	0.283	26.3	63.2
4.0 - 6.0	3.0	4.7	0.052	0.938	15.8	78.9
6.0 - 8.0	1.0	6.3	0.005	0.005	5.3	84.2
8.0 - 10.0	2.0	8.1	0.223	0.235	10.5	94.7
10.0 - 12.0	1.0	11.2	0.170	0.170	5.3	100.0

TOTAL NUMBER OF FEET = 19.0

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MARATHON OIL COMPANY
FIELD : WILDCAT

WELL : #1-23 TIN CUP MESA
COUNTY, STATE: SAN JUAN, UTAH

GROUPING BY PERMEABILITY RANGES

PERMEABILITY RANGE	FEET IN RANGE	AVERAGE PERM. (GEOM.)	AVERAGE PERM. (ARITH)	AVERAGE POROSITY	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
0.005 - 0.010	8.0	0.005	0.005	2.9	42.1	42.1
0.010 - 0.020	1.0	0.010	0.010	4.3	5.3	47.4
0.039 - 0.078	1.0	0.060	0.060	0.5	5.3	52.6
0.156 - 0.312	4.0	0.224	0.235	7.4	21.1	73.7
0.312 - 0.625	1.0	0.420	0.420	1.6	5.3	78.9
0.625 - 1.250	2.0	0.989	0.995	1.8	10.5	89.5
2.500 - 5.000	1.0	2.8	2.8	4.7	5.3	94.7
5.- 10.	1.0	6.4	6.4	0.8	5.3	100.0

TOTAL NUMBER OF FEET = 19.0

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MARATHON OIL COMPANY
FIELD : WILDCAT

WELL : #1-23 TIN CUP MESA
COUNTY, STATE: SAN JUAN, UTAH

POROSITY-FEET OF STORAGE CAPACITY LOST FOR SELECTED POROSITY CUT OFF

POROSITY CUT OFF	FEET LOST	CAPACITY LOST (%)	FEET REMAINING	CAPACITY REMAINING (%)	ARITH MEAN	MEDIAN
0.0	0.0	0.0	19.0	100.0	3.6	3.0
2.0	7.0	10.8	12.0	89.2	5.1	4.7
4.0	12.0	30.0	7.0	70.0	6.8	7.0
6.0	15.0	50.5	4.0	49.5	8.4	9.0
8.0	16.0	59.7	3.0	40.3	9.2	
10.0	18.0	83.6	1.0	16.4	11.2	
12.0	19.0	100.0	0.0	0.0		

TOTAL STORAGE CAPACITY IN POROSITY-FEET = 68.3

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

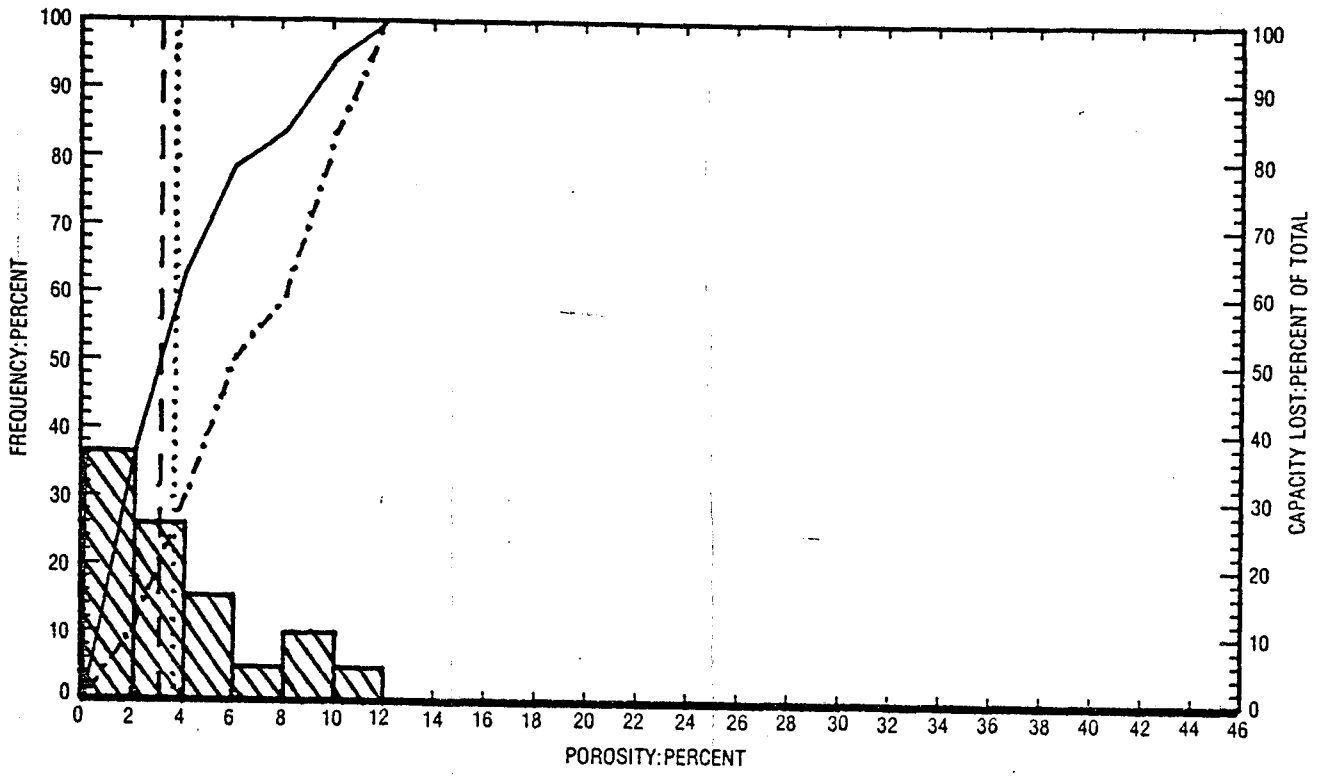
COMPANY: MARATHON OIL COMPANY
FIELD : WILDCAT

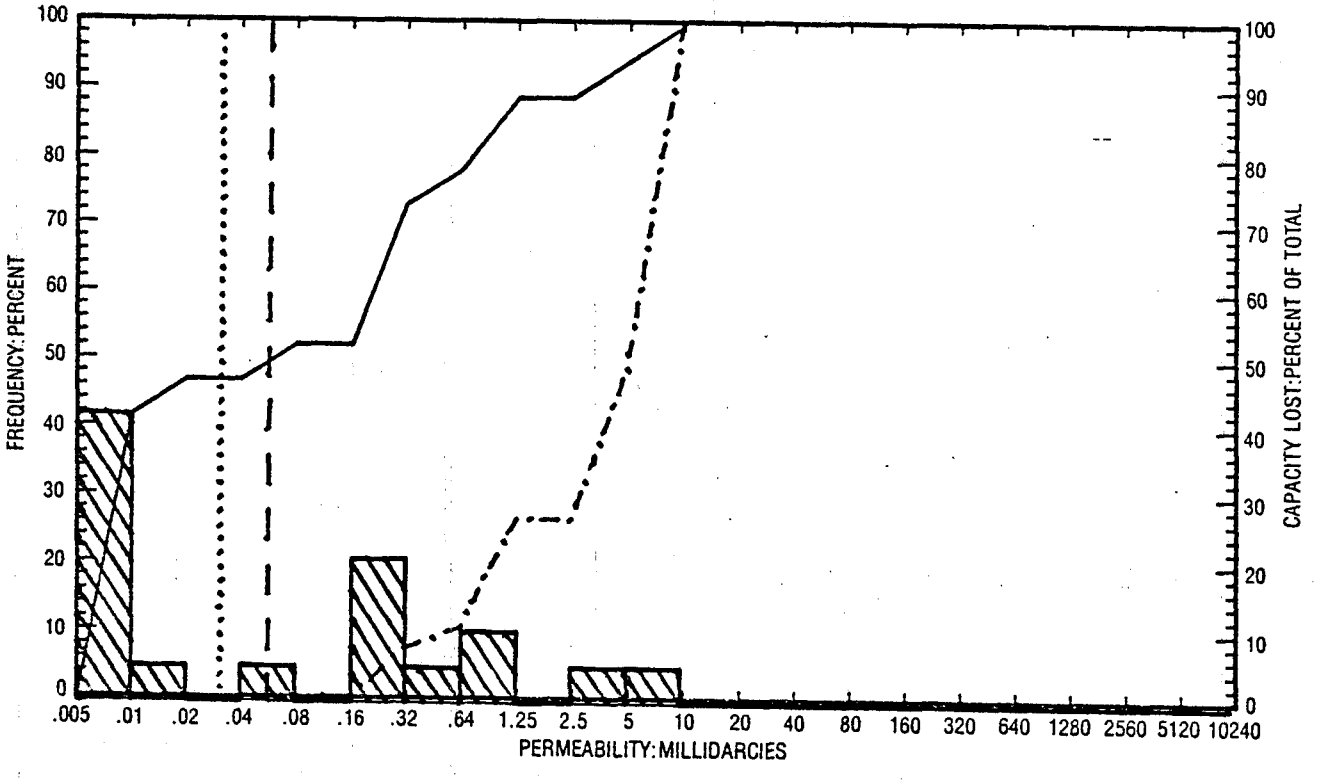
WELL : #1-23 TIN CUP MESA
COUNTY, STATE: SAN JUAN, UTAH

MILLIDARCY-FEET OF FLOW CAPACITY LOST FOR SELECTED PERMEABILITY CUT OFF

PERMEABILITY CUT OFF	FEET LOST	CAPACITY LOST (%)	FEET REMAINING	CAPACITY REMAINING (%)	GEOM MEAN	MEDIAN
0.005	0.0	0.0	19.0	100.0	0.03	0.06
0.010	8.0	0.3	11.0	99.7	0.36	0.29
0.020	9.0	0.4	10.0	99.6	0.51	0.31
0.039	9.0	0.4	10.0	99.6	0.51	0.31
0.078	10.0	0.9	9.0	99.1	0.64	0.44
0.156	10.0	0.9	9.0	99.1	0.64	0.44
0.312	14.0	8.3	5.0	91.7	1.49	1.05
0.625	15.0	11.6	4.0	88.4	2.05	1.25
1.250	17.0	27.4	2.0	72.6	4.23	5.00
2.500	17.0	27.4	2.0	72.6	4.23	5.00
5.	18.0	49.6	1.0	50.4	6.40	
10.	19.0	100.0	0.0	0.0		

TOTAL FLOW CAPACITY IN MILLIDARCY-FEET(ARITHMETIC) = 12.63





PERMEABILITY AND POROSITY HISTOGRAMS

MARATHON OIL COMPANY
#1-23 TIN CUP MESA
WILDCAT
SAN JUAN, UTAH

Ismay Fm.
5572-5591

LEGEND

ARITHMETIC MEAN POROSITY .....
GEOMETRIC MEAN PERMEABILITY .....
MEDIAN VALUE — — —
CUMULATIVE FREQUENCY ———
CUMULATIVE CAPACITY LOST •—•—•—

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MARATHON OIL COMPANY
FIELD : WILDCAT

WELL : #1-23 TIN CUP MESA
COUNTY, STATE: SAN JUAN, UTAH

AIR PERMEABILITY : MD. (HORIZONTAL) RANGE USED 0.001 TO 4.
POROSITY : PERCENT (HELIUM) RANGE USED 0.0 TO 46.0

(PERMEABILITY UNCORRECTED FOR SLIPPAGE)

DEPTH LIMITS : 5755.0 - 5776.0 INTERVAL LENGTH : 21.0
FEET ANALYZED IN ZONE : 21.0 LITHOLOGY EXCLUDED : NONE

DATA SUMMARY

POROSITY AVERAGE	PERMEABILITY AVERAGES ARITHMETIC	HARMONIC	GEOMETRIC
7.3	0.26	0.01	0.04

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MARATHON OIL COMPANY
FIELD : WILDCAT

WELL : #1-23 TIN CUP MESA
COUNTY, STATE: SAN JUAN, UTAH

GROUPING BY POROSITY RANGES

POROSITY RANGE	FEET IN RANGE	AVERAGE POROSITY	AVERAGE PERM. (GEOM.)	AVERAGE PERM. (ARITH)	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
2.0 - 4.0	5.0	3.5	0.025	0.108	23.8	23.8
4.0 - 6.0	3.0	4.5	0.021	0.023	14.3	38.1
6.0 - 8.0	2.0	6.6	0.007	0.007	9.5	47.6
8.0 - 10.0	8.0	8.5	0.075	0.148	38.1	85.7
12.0 - 14.0	2.0	13.3	0.832	1.8	9.5	95.2
14.0 - 16.0	1.0	14.1	0.090	0.090	4.8	100.0

TOTAL NUMBER OF FEET = 21.0

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MARATHON OIL COMPANY
FIELD : WILDCAT

WELL : #1-23 TIN CUP MESA
COUNTY, STATE: SAN JUAN, UTAH

GROUPING BY PERMEABILITY RANGES

PERMEABILITY RANGE	FEET IN RANGE	AVERAGE PERM. (GEOM.)	AVERAGE PERM. (ARITH)	AVERAGE POROSITY	FREQUENCY (PERCENT)	CUMULATIVE FREQUENCY (%)
0.005 - 0.010	2.0	0.005	0.005	8.3	9.5	9.5
0.010 - 0.020	6.0	0.010	0.010	5.0	28.6	38.1
0.020 - 0.039	3.0	0.026	0.027	4.2	14.3	52.4
0.078 - 0.156	4.0	0.104	0.105	9.6	19.0	71.4
0.156 - 0.312	3.0	0.186	0.187	10.1	14.3	85.7
0.312 - 0.625	2.0	0.490	0.490	5.9	9.5	95.2
2.500 - 5.000	1.0	3.3	3.3	13.1	4.8	100.0

TOTAL NUMBER OF FEET = 21.0

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MARATHON OIL COMPANY
FIELD : WILDCAT

WELL : #1-23 TIN CUP MESA
COUNTY, STATE: SAN JUAN, UTAH

POROSITY-FEET OF STORAGE CAPACITY LOST FOR SELECTED POROSITY CUT OFF

POROSITY CUT OFF	FEET LOST	CAPACITY LOST (%)	FEET REMAINING	CAPACITY REMAINING (%)	ARITH MEAN	MEDIAN
0.0	0.0	0.0	21.0	100.0	7.3	8.1
2.0	0.0	0.0	21.0	100.0	7.3	8.1
4.0	5.0	11.5	16.0	88.5	8.5	8.7
6.0	8.0	20.3	13.0	79.7	9.4	9.1
8.0	10.0	28.8	11.0	71.2	9.9	
10.0	18.0	73.3	3.0	26.7	13.6	
12.0	18.0	73.3	3.0	26.7	13.6	
14.0	20.0	90.8	1.0	9.2	14.1	
16.0	21.0	100.0	0.0	0.0		

TOTAL STORAGE CAPACITY IN POROSITY-FEET = 152.9

STATISTICAL DATA FOR POROSITY AND PERMEABILITY HISTOGRAM

COMPANY: MARATHON OIL COMPANY
FIELD : WILDCAT

WELL : #1-23 TIN CUP MESA
COUNTY, STATE: SAN JUAN, UTAH

MILLIDARCY-FEET OF FLOW CAPACITY LOST FOR SELECTED PERMEABILITY CUT OFF

PERMEABILITY CUT OFF	FEET LOST	CAPACITY LOST (%)	FEET REMAINING	CAPACITY REMAINING (%)	GEOM MEAN	MEDIAN
0.005	0.0	0.0	21.0	100.0	0.04	0.03
0.010	2.0	0.2	19.0	99.8	0.06	0.09
0.020	8.0	1.3	13.0	98.7	0.14	0.14
0.039	11.0	2.8	10.0	97.2	0.24	0.20
0.078	11.0	2.8	10.0	97.2	0.24	0.20
0.156	15.0	10.5	6.0	89.5	0.41	0.31
0.312	18.0	20.9	3.0	79.1	0.93	
0.625	20.0	39.1	1.0	60.9	3.30	3.54
1.250	20.0	39.1	1.0	60.9	3.30	
2.500	20.0	39.1	1.0	60.9	3.30	
5.	21.0	100.0	0.0	0.0		

TOTAL FLOW CAPACITY IN MILLIDARCY-FEET(ARITHMETIC) = 5.40

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

CORE ANALYSIS REPORT

FOR

MARATHON OIL COMPANY

VARIOUS WELLS
TIN CUP MESA FIELD
SAN JUAN COUNTY, UTAH

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

MARATHON OIL COMPANY
VARIOUS WELLS
TIN CUP MESA FIELD
SAN JUAN COUNTY, UTAH

DATE : 11-NOV-84
FORMATION :
DRLG. FLUID: WATER BASE MUD
LOCATION :

FILE NO : 3804-6918
ANALYSTS : S.S.
ELEVATION:

VERTICAL PERM ANALYSIS-VARIOUS WELLS

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	PERM. TO AIR (MD) VERTICAL	DESCRIPTION
	#1-23 TIN CUP MESA			
4	5575.0-76.0		0.01	
5	5576.0-77.0		0.01	
14	5585.0-86.0		0.09	
17	5588.0-89.0		0.17	
	#1-25 TIN CUP MESA			
1	5452.0-53.0		0.10	
5	5456.0-57.0		0.13	
6	5416.0-17.0		0.04	
9	5419.0-20.0		2.11	
12	5422.0-23.0		0.01	
16	5426.0-27.0		0.93	
20	5430.0-31.0		3.47	
25	5435.0-36.0		0.03	
37	5447.0-48.0		0.03	
20	5471.0-72.0		0.09	
43	5474.0-75.0		2.32	
	#2-23 TIN CUP MESA			
7	5460.0-61.0		30.	
20	5473.0-74.0		0.92	
24	5477.0-78.0		0.96	
32	5485.0-86.0		0.07	

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CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

MARATHON OIL COMPANY
VARIOUS WELLS

DATE : 11-NOV-84
FORMATION :

FILE NO : 3804-6918
ANALYSTS : S.S.

VERTICAL PERM ANALYSIS-VARIOUS WELLS

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	PERM. TO AIR (MD) VERTICAL	DESCRIPTION
45	5498.0-99.0		0.15	
56	5509.0-10.0		0.04	
60	5513.0-14.0		1.70	
62	5515.0-16.0		0.07	
64	5517.0-18.0		0.64	
71	5524.0-25.0		0.04	
76	5529.0-30.0		0.01	
83	5536.0-37.0		0.86	
84	5537.0-38.0		0.64	
87	5540.0-41.0		7.10	
90	5543.0-44.0		0.04	
108	5561.0-62.0		0.27	
111	5564.0-65.0		0.17	
	#3-23 TIN CUP MESA			
11	5589.0-90.0		9.23	
18	5596.0-97.0		0.02	
26	5604.0-05.0		0.04	
30	5608.0-09.0		0.02	
31	5609.0-10.0		1.27	
33	5611.0-12.0		0.02	
38	5616.0-17.0		0.09	
41	5619.0-20.0		0.20	
47	5625.0-26.0		0.04	
51	5629.0-30.0		1.42	
55	5633.0-34.0		6.40	
60	5638.0-39.0		0.54	
63	5641.0-42.0		43.	
66	5644.0-45.0		0.53	

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

MARATHON OIL COMPANY
VARIOUS WELLS

DATE : 11-NOV-84
FORMATION :

FILE NO : 3804-6918
ANALYSTS : S.S.

VERTICAL PERM ANALYSIS-VARIOUS WELLS

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	PERM. TO AIR (MD) VERTICAL	DESCRIPTION
69	5647.0-48.0		2.55	
	#3-26 TIN CUP MESA			
3	5467.0-68.0		0.81	
7	5471.0-72.0		0.01	
17	5481.0-82.0		12.	
22	5486.0-87.0		3.27	
27	5491.0-92.0		4.38	
37	5501.0-02.0		8.86	
46	5510.0-11.0		0.05	
47	5511.0-12.0		0.73	
52	5516.0-17.0		3.62	
60	5524.0-25.0		0.93	
71	5535.0-36.0		0.03	
75	5539.0-40.0		16.	
78	5542.0-43.0		0.01	
89	5553.0-54.0		4.20	
101	5565.0-66.0		0.18	